ANSIT ISSUE: ROTTERDAM SOLVES WATERLOGGING PROBLEM p. 22

January 1/8, 1968

RAILWAY AGE

THE TRANSPORTATION WEEKLY

What's ahead for rail transit in '68?

p. 16

R NEW YORK STRAPHANGERS:

New cars herald a happier New Year

p. 19

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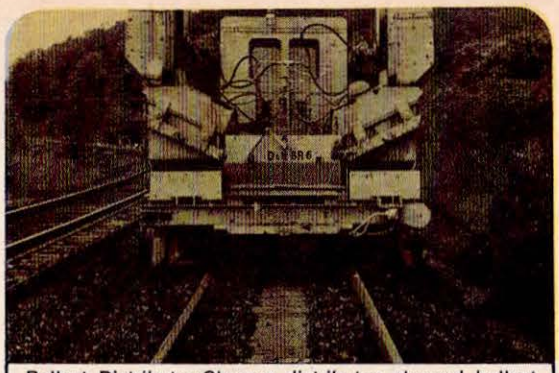
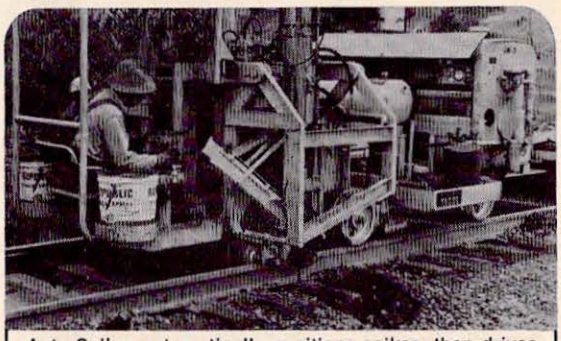


Ballast Distributor-Cleaner distributes cleaned ballast in correct position for tamping at 1.1¢ per foot.



Auto-Spiker automatically positions spikes, then drives them into the ties—two at each rail simultaneously.

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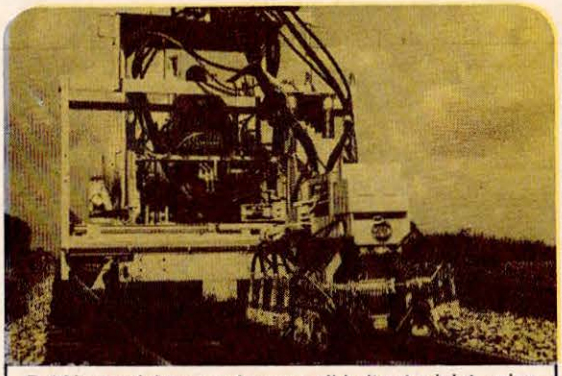
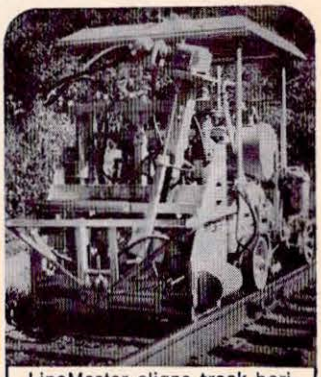
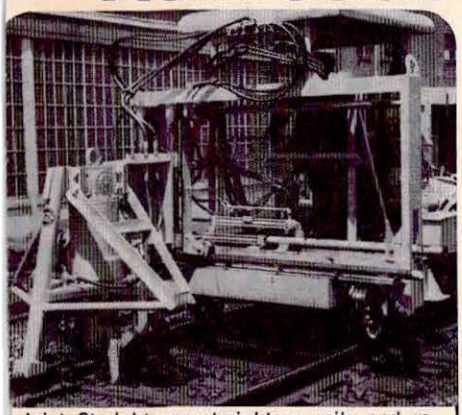


BoltMaster tightens or loosens all bolts at a joint, using either 6- or 4-chuck head.



LineMaster aligns track horizontally, always sliding it, never "humping" it.



Joint Straightener straightens rails and restores camber to joint bars by vertical cold bending.

All 40 RMC Track Maintenance Machines exist to save money for railroads—by reducing labor costs and doing the job better. Five representative money saving machines shown here—ask for Bulletin AP which summarizes the complete line.

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RAILWAY AGE January 1/8, 1968 • Vol. 164, No. 1

THIS WEEK

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. . . AND COMING NEXT WEEK

Engineering Issue: Hauling coal from mines to market is a major source of revenue for railroads. But coal is found in difficult terrain—and building the lines to bring coal to the customer requires great engineering skill. In the Jan. 15 issue, Engineering Editor M. H. Dick describes the techniques used in building the new, 35-mile Waynesburg Southern, due for completion late in '68. A second article, by Associate Engineering Editor R. E. Dove, tells the story behind a new coal-storage and transfer facility of the N&W at Sandusky, Ohio.

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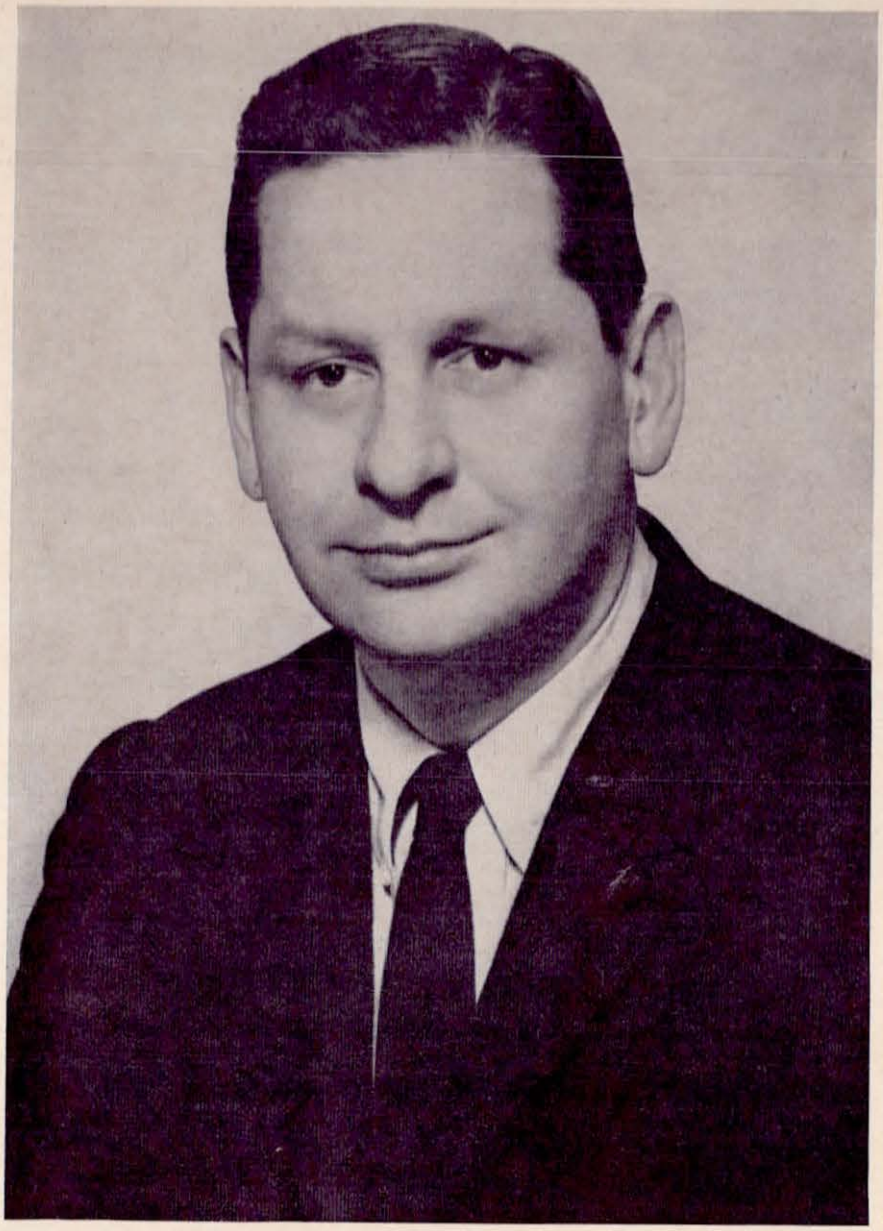


B. R. STOKES, GENERAL MANAGER
Bay Area Rapid Transit District

"A true renaissance in rapid transit is underway in the United States. The people of the Bay Area led the way in this movement when they approved the $792 million bond issue in 1962, enabling the Bay Area to build an entirely new 75-mile system.

"Now, five years later, we are delivering that system with more than $500 million in construction underway. During that period the nationwide renaissance has become fully apparent. Today, some $10 billion in new and improved rapid transit facilities is being planned or built. I, and the key members of my staff, find Railway Age an invaluable means of keeping up with the fast moving activities in this field."

SHORT AND SIGNIFICANT

Chicago and Boston order 226 cars

Two big transit-car orders were placed at year-end. Chicago awarded a contract valued at $18,750,000 to Budd for 150 new air-conditioned transit cars. The Massachusetts Bay Transportation Authority, Boston, placed a $13-million order with Pullman-Standard for 76 cars. (For details, see p. 35). In other actions, MBTA signed agreements extending for six months the contract services performed by the Boston & Maine and the New Haven in the Massachusetts Bay Area. The $1.5-million contract with the B&M calls for service to 13 North Shore communities. The $550,000 contract with the New Haven provides for service to nine communities lying to the south.

●

Bay Area awards $15 million in contracts

Bay Area Rapid Transit announced award of contracts totalling $15 million. Largest order went to Kaiser Aluminum & Chemical, for supply of $7.5 million worth of contract rail and accessory equipment. General Electric won a $4.95 million contract to supply 41 transformer rectifiers for sub-stations; General Railway Signal won a $484,000 contract to supply 225 switch and lock movements. Of unusual interest was the award of a contract worth $2.1 million to the Ben C. Gerwick Co. of San Francisco to supply 146,000 concrete cross-ties. Built to BART' own specifications, and somewhat similar to the AAR tie, the Gerwick tie is 9 feet long, 10 inches wide, and entirely rectangular in cross-section.

●

TurboTrain tops 170 mph

That Pennsylvania test track in New Jersey is fast . . . and getting faster. At year's end, the gas-turbine-powered "TurboTrain" of United Aircraft topped 170 mph on two successive runs over the 21-mile route and reached a maximum of 170.8 mph with a large press group aboard. The road tests are a phase of the train's acceptance by the U.S. Department of Transportation. D.O.T. is to lease this three-car set and its twin which is nearing completion at Pullman-Standard's Chicago plant for operation over the New Haven between Boston and New York as part of the Northeast Corridor high-speed ground transportation project. Prior to the TurboTrain's record spurt, two of the Budd-built electric Metroliners reached 164 mph on the same track (RA, Dec. 4, 1967, p. 7).

●

George Green elevated by Pullman-Standard

George L. Green, vice president and general manager of the Pullman-Standard Division of Pullman Inc. since Jan. 1, 1965, became president of the division on Jan. 1. In that post he succeeds J. W. Scallan, who retired Dec. 31 after 41 years of service with the Pullman group of companies. Scallan, who remains as a director of Pullman Inc., also retired as president of the Trailmobile Division, and was succeeded by J. M. Gilroy. In addition to his appointment as president of Pullman-Standard, Green was named an executive vice president at the corporate level and was elected to the board of directors.

●

Rice takes over as SCL chief executive

W. Thomas Rice, who became president of the Seaboard Coast Line when it was formed by merger of the Atlantic Coast Line (which Rice formerly headed) and the Seaboard Air Line last July 1, is now SCL's chief executive officer as well. In that position he succeeds John W. Smith (formerly head of the Seaboard), who continues as chairman of the board.

MONDAY MORNING REPORT

ICC set to renew income-data demands

New requirements for the reporting of net income may be in the offing for railroads and other carriers regulated by the ICC. This was indicated by the Commission's annual report, the 81st, which went to Congress late last month. As listed in the report, prospective new requirements being studied include revised procedures to disclose significant information concerning federal income taxes resulting from accelerated depreciation, guideline lives, investment tax credits, and other allowances used for tax purposes but not recorded in the accounts under ICC accounting rules. A somewhat similar announcement was made by the Commission in its previous annual report, but there was no follow through. That's expected this year.

Railroads think they do enough reporting

Railroads will resist if the Commission proposes any substantial increase in its present reporting requirements. Presumably, the Commission will hear this opposition in a so-called rule-making proceeding, the usual processing for such proposals. It already gets some figures reported by the railroads to the Internal Revenue Bureau for income-tax purposes, but it is understood to feel that it needs more information to round out these figures. The different showing of reports to IRS and ICC is pointed up by estimates for 1967. Then, income-tax arrangements (not sanctioned by ICC accounting rules) seem to have had the effect of increasing the year's net income by about $250 million.

Draft of tidied IC Act promised this year

The report announced that the Commission expects to submit to Congress this year the draft of a bill which could consolidate the Interstate Commerce Act's four parts into a single comprehensive statute. This tidying job was given to the Commission last year by the chairman of the Senate Commerce Committee—Sen. Warren G. Magnuson (D.-Wash.). The Senator thinks the Act needs that treatment because it has been modified by some 80 amendments since it was passed originally in 1887. His project recalls Congress' rejection of a similar proposal when the Transportation Act of 1940 was being shaped up. That proposal was called a plan for codification, which then meant rewriting the act to make the same regulatory provisions apply to all covered modes of transport. Magnuson does not regard his present undertaking as a codification plan. To allay fears which made the 1940 project controversial, he emphasizes that the neat package he visualizes would contain no changes in substantative provisions of the present Act.

Easing of car supply problem is praised

Last year's improvement in the freight-car supply situation was noted by the Commission, and it listed railroad acquisition and modernization programs as contributing factors. The report went on to cite what it calls "impressive advances" made in modernizing the freight-car fleet during the past five years. It hastened to add, however, that car shortages in tht 1966 half of the fiscal year under review were the worst experienced since World War II.

Special cars are good, but so are plain ones

The report also pointed out that the specialized, high-capacity cars have contributed much to the improved showings as to car utilization and income as well as to better service at lowered rates. But the shortages of 1966 "emphasized anew the need for construction of additional all-purpose freight cars." Meanwhile, however, the Commission found it unnecessary to issue emergency car orders covering railroad movements of military freight to ports for shipment to Vietnam.

Joseph Asher's

TRANSIT ROUNDUP

WHAT HAPPENS TO EXPO EXPRESS? Speculation surrounds the fate of the six eight-car trains that carried millions of visitors around Expo '67 in Montreal last summer. They could hardly be turned into scrap: Hawker-Siddeley built 48 aluminum cars with air conditioning and modern appointments that were clearly intended for long-range use. The same goes for the automatic train control equipment furnished by WABCO to run the trains.

When the trains were first built, the talk was that, once the fair is over, some other system might want the cars at a cut-rate price. Alternatively, some small-to-medium-sized city with existing rail rights of way might be able to create a system around the cars.

A number of possibilities have been mentioned. Since 1964, Edmonton, Alberta has had a feasibility plan for a system, utilizing mostly existing rail lines. Local officials have speculated that the Expo Express cars would make the cost of a transit system even cheaper.

Another possibility is Staten Island Rapid Transit, a surface-level system whose pre-war cars barely totter from Tottenville to the New York ferry connection. The New York transportation bond issue is expected to have some financial fall-out for SIRT; purchase of new or second-hand cars might be involved.

Still another possibility is Calgary, Alberta's other major city. Conditions are similar to Edmonton: skyrocketing population, boom economic conditions. Engineering consultants are working now on a report that is expected to urge rapid transit.

CRY ALL THE WAY TO THE BANK: The Bay Area Rapid Transit System is in trouble—or that's the impression you may get, if you go by what is printed in some of the more circulation-conscious newspapers in the San Francisco area. The by-now well-publicized cost overrun—put at between $120-$160 million—has caused many people to wonder whether (a) the system will get built, but along Third-Avenue-El lines; (b) the system will ever get built at all.

The funny thing is, the bankers and brokers with a direct stake in all this don't seem to be panicking: The offering, two months ago, of a $70 million block of BART general obligation bonds was snapped up in no time by investors, according to officials of the Bank of America, which heads the underwriting syndicate marketing the issues. While the interest rate on this block of bonds is admittedly higher than it was three years ago—it's gone from just under 4% to 4.4%—most observers attribute this more to the present state of the bond market than to a vote of diminished confidence in BART. As a matter of fact, a State of California bond issue not too long ago went at 4.3%. Does anyone want to argue that the Golden State is about to go under?

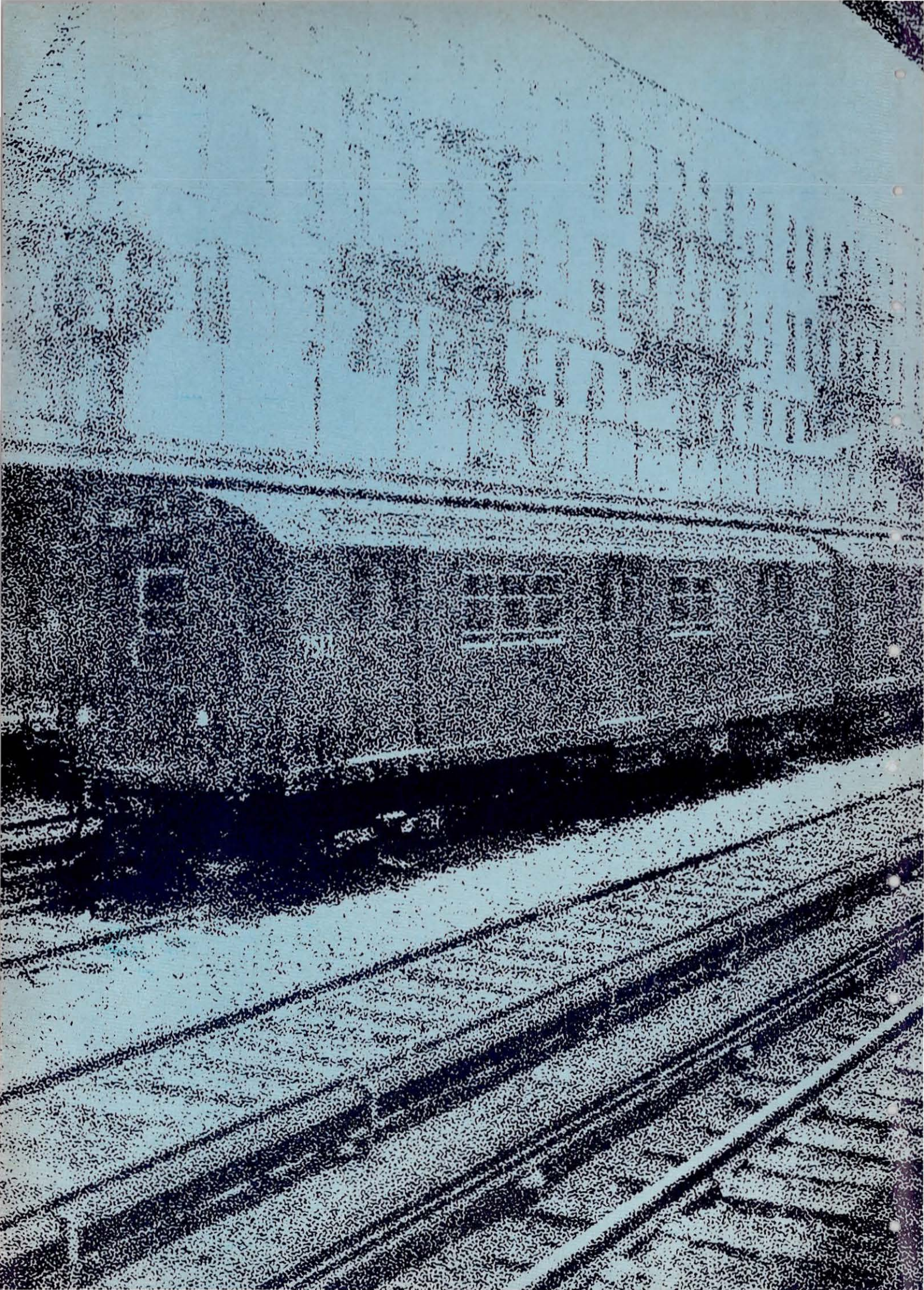
BART'S A BIG, BAD BEASTIE: The Bay Area system has had its problems Chronicled; it's time they were Examined. A year ago, certain newspapers had a field day over the abrupt resignation of BART's two visual design consultants. The latter charged that they were ignored or bypassed in all decision-making, and left with dark warnings of a hideous eyesore that would soon disfigure Bay Area communities—the BART system.

In the event, BART's General Manager produced detailed proof that their charges were without foundation, won an endorsement of his general procedures from the American Institute of Architects, and appointed a new visual design consultant no less prestigious than the two that left.

BART is not going to be an eyesore, as the series of linear parks being created below the system's aerial lines show (see photo). The Department of Housing and Urban Development aided in financing the parks, and HUD Secretary Dr. Robert Weaver went out there recently to present an award for excellence in urban-transport design to the BART management.

ROTTERDAM IS NOT ALONE—On page 22 is a report on the new transit system Rotterdam is inaugurating. A month ago, Railway Age reported on the opening of a new system in Baku, Russia's fifth system, and of construction going on for a sixth one in Kharkov.

Dozens more names of cities around the world that are building new transit networks could be added. But in the meantime, U.S. transit leaders contend with influential figures who argue that rapid transit will have little or no place in tomorrow's transport picture.



Brooklyn . . . 1960

And the shuttle train raced down the track on another test run. There were people aboard—GRS engineers—but no one was at the controls. Automation had taken over—including programmed starting, running speed control, precision station stopping, and automatic control of doors and destination signs. The successful tests led to placing the train in regular service between Grand Central and Times Square.

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RAILWAY AGE
THE TRANSPORTATION WEEKLY
January 1/8, 1968

WEEK AT A GLANCE

Freight-car orders highest since June

Class I railroads placed orders in November for 6,221 new freight cars—the highest since last June, which was the first month after reinstatement of the 7% investment tax credit. June orders totaled 7,799 cars. The November figure was more than double that of October, when 2,398 new cars were ordered. New-car orders in last year's first 11 months totaled 45,949, compared with 91,413 in the corresponding 1966 period. Orders for rebuilt cars in the same period were 15,917 in 1967 and 11,616 in 1966. (See page 35 for full report of American Railway Car Institute.)

Fruit Growers will spend $25 million

Equipment programs for 1968, just announced by Fruit Growers Express, will involve expenditure of over $25 million. FGE will build 300 mechanical refrigerator cars and 600 insulated bunkerless (RB) cars; 300 mechanically refrigerated trailers are to be ordered. The FGE shop at Alexandria, Va., has just completed a $13 million program which produced 676 RB cars tailored for specific loading requirements and leased to FGE-owner railroads. Over the past five years the car line has expended more than $180 million for 6,622 cars and 3,100 trailers.

Carriers, Clerks agree on two-year pact

For members of the Brotherhood of Railway & Airline Clerks—those working on the railroad that is—Jan. 1 carried with it a pay increase. And three more raises will be coming along at six-month intervals in 1968-69. Terms of an agreement negotiated by BRAC and the National Railway Labor Conference call for increases of 2.5% Jan. 1, 1968; 3.5% on July 1; 2% on Jan. 1, 1969; and 3% on July 1, 1969. In addition the railroads have agreed to set aside 5 cents per hour for each employee covered, for a "classification evaluation fund."

According to NRLC, the fund "will be administered jointly by management and labor on the individual properties to remedy situations where, after considering all factors involved, it is determined that the content of a job is not being properly recognized monetarily."

It could be that this settlement with the largest of the rail unions will lead to a general movement toward order and away from what sometimes must resemble chaos. As NRLC puts it, "the 6-month adjustments were decided upon in an attempt to reconcile the various periods for which contracts are now in effect for the separate organizations. . . . With this settlement as a starting point, it is hoped that the other contracts can be properly adjusted when new agreements are made." If the two-year moratorium on contract changes can be extended from the BRAC agreement to embrace other unions, NRLC points out with emphasis, "it would mean that the carriers could more accurately forecast their financial future and make meaningful plans."

How about those other organizations? Even allowing for the normal desires of one union leader to get more than his neighbor-in-labor got, some observers think the industry is on the track of a good thing. And there's an inclination to look next at the biggest of the operating unions, the Brotherhood of Railroad Trainmen, which was the first union to reach settlement in the preceding wage movement, in 1966.

In their initial demands, the Clerks asked for 7½% Jan. 1, 1968, and another 7½% on July 1, 1969. The Trainmen called for a flat 12½% boost Jan. 1. Both organizations included demands for a cost-of-living escalator clause. In the settlement eventually reached, the wage increases for BRAC members were within the ball park—but the escalator clause didn't make it. One source close to the BRT indicated that this factor might weigh against the union's going for an agreement covering more than a year. On the other hand, he added, "two years isn't really such a long time." And over-all, most observers tended to regard the prospects of peaceful settlement with the Trainmen as "promising."

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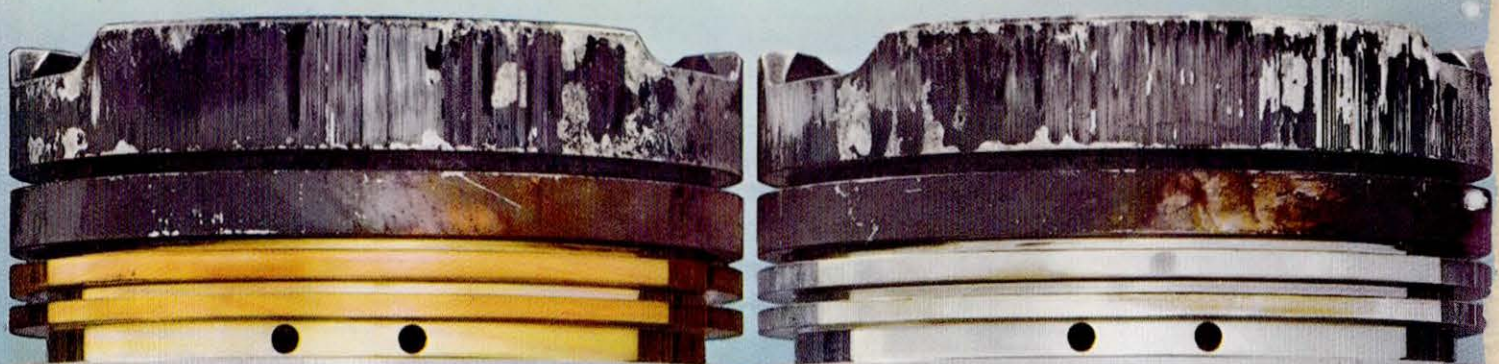


MOST WIDELY USED SUPERIOR-TYPE OIL

Note lacquer buildup in this piston's ring belt area—result of a Texaco Diesel Screening Test in which both pistons shown were run 50 hours in a single-cylinder, high-output diesel test engine at 1500 rpm, 225°F. oil gallery temperature. Oil performance in a TDST is evaluated by a demerit system applied to the undercrown and ring belt areas. The piston above, lubricated with the most widely used superior-type oil, rated 142.2 demerits.

SHELL TORNUS OIL

Note the virtual absence of lacquer in this piston's ring belt area—yet both pistons shown are specimens from identical Texaco Diesel Screening Tests. In a TDST, conventional railroad engine oils usually rate 180 to 210 demerits. High-dispersancy oils usually rate 110 to 150 demerits. The piston, *left,* lubricated with the most widely used superior-type oil, rated 142.2 demerits. The piston, *above,* lubricated with Shell Tornus Oil, rated 86.5 demerits.

IC plus GM&O equals Illinois Central Gulf

Illinois Central President W. B. Johnson, whose office is in Chicago, and Gulf, Mobile & Ohio President G. P. Brock, whose office is in Mobile, met Dec. 28 in Jackson, Miss. And there, in the Governor's office, with the Governor and the Governor-elect looking on, they signed the official documents under which IC and GM&O plan to merge and create the Illinois Central Gulf Railroad Co.

And why in Mississippi? More than 28% of the total mileage of the planned new system lies within the state and, as Johnson and Brock put it in a joint statement, "our roots run deep in Mississippi."

Under the merger plan, a new corporation would be formed to acquire the properties of the two roads, subject to their liabilities. The new corporation would be a wholly-owned subsidiary of Illinois Central Industries, the surviving holding company. Brock is to be the chairman and Johnson the president of both the new railroad and ICI.

The IC-GM&O statement called attention to the potential of the consolidation and added: "We feel certain Illinois Central Gulf would maximize the proficiency and usefulness of the two separate lines and we are confident the over-all results would prove of benefit to everyone in the expanding mid-continent area. We shall strive to accomplish this merger with minimum inconvenience to anyone."

So, with Governor Johnson and Governor-elect Williams standing by, the signatures went on the appropriate lines. Boards of directors of IC and GM&O have approved the plan; yet to come is action by shareholders of the two railroads and of Illinois Central Industries—and, of course consideration by the Interstate Commerce Commission.

GUS WELTY'S LINES ON LABOR

WELTY

A MONUMENT isn't really a monument unless it has chiseled into it words that will live forever. If it honors some long-gone general, for instance, it might be inscribed: "He never gave up." If it memorializes the career of a politician, it might tell posterity: "He never shut up." And if it offers some lasting observation-in-granite on the professional proclivities of a battler in the management-labor arena—it doesn't much matter on which side—it just might say: "He never saw why." Think about that one—because it's not really bad, if you have about you just a touch of cynicism.

TAKE A LOOK at what reporters dutifully report. Union A gets a better-than-average increase in wages and benefits, and the bossman at Union B tells the press that "I don't see why we shouldn't share in this growing prosperity." Or, to put it in a railroad situation, when the figures show ton-miles up and employment down, some union chief will always observe that "I don't see why we shouldn't share in this tremendous increase in productivity." Or, to kick it over to the other side—because nobody has a monopoly on not being able to see—let's say a railroad's management invests millions in new, efficiency-producing, labor-saving technology. Sooner or later, somebody's bound to say that "I don't see why we need to keep paying people we don't need."

THE PHRASE is a guaranteed sympathy-getter, if sympathy is what you want, and if you're content to accept it from the people you knew would be sympathetic in the first place. It's also as phony as a W. C. Fields lecture on sobriety. It's taken seriously only by the naive, and that applies equally to utterers and listeners. It ought to be banned, but it's probably too late for New York's resolutions. "I don't see why . . ." lingers in the language, and it probably always will. Maybe what's really needed is a set of stock answers.

IF UNION B's chief can't see why his boys shouldn't get Union A's raise, how about somebody just observing that "You don't deserve it." Or, for the management fellow who can't see why he has to pay people who aren't needed, why not a simple "because this is 1968, you reactionary."

THE POINT IS that there are economic and political realities. The tragedy is that, so often, management people seem to depend upon the economic truths while their counterparts in labor put faith in the political. Maybe, at some point, everybody ought to realize that economic reality is real reality—and that no amount of political juggling can change it.

Weaver vs Boyd: The odds favor Boyd

Coming to a head right now is the question of whether the Urban Transportation Administration is going to stay where it is, in the Department of Housing and Urban Development, or whether it will be shifted over to the Department of Transportation.

Observers in Washington say that DOT's arguments appear to be gaining in Administration circles. HUD has its hands full with every sort of urban problem, and its top officials have frequently been put on the carpet by irate congressmen who don't like putting money into cities in the first place.

DOT, on the other hand, begins with a clean slate in this field, and as purveyors of a broad view of transportation, might turn out to be more persuasive defenders of urban transport programs.

But there's another angle: Are DOT's senior officials fully attuned to present-day urban transport needs? Their opposite numbers at HUD, whatever their limitations (including a propensity to treat every minor funding project as a "massive effort" or a "major breakthrough"), have proved they understand what is needed. As for the men in the top echelon at DOT, this remains an open question.

Whichever department gets to keep UTA, it will have to be on guard against that creeping disease, "Demonstration-itis." This most ancient affliction has the following symptons:

—When in doubt as to what Congress will fund, launch a couple of studies.

—When the studies are done, launch a study to compile the findings of the other studies.

—When the findings have been compiled, launch a demonstration, or pilot project, preferably in superhygienic circumstances, where no people might stand to benefit immediately.

—When transportation experts warn that traffic is completely jammed, or that service is about to break down completely, pull out a report on pneumatic tubes for 1980, and start talking confidently about how present-day surface-transport technology "has had it—we need bold, new ideas."

On the drawing board

Architects and designers are busy working on station concepts for the coming $2.5 billion, 95-mile system planned for Washington, D.C.

Transit in 1968: Out of the doldrums

Federal aid won't skyrocket—or dry up, either. Cities and states are taking to 'operation bootstrap'—bond issues.

On the way

Construction of Bay Area Rapid Transit's cross-bay tube is well advanced.

BY JOE ASHER

Insiders in Washington report that the Administration has put out the word that the airport extension of the Cleveland Transit System must be finished by the first of November 1968—in other words, in time for the Presidential election.

The Administration obviously wants something tangible with which to go to the urban voters. The reasoning is that urban voters are the key to any major election, and the Cleveland project is the most concrete example of what has been accomplished—not just started but seen through to the end—since the federal transit-aid program began.

There is no doubt that the Administration, and to an increasing extent Congress have their hearts in the right places when it comes to mass transit. Aside from down-the-line expressions of support, the Administration and its congressional allies in both parties were instrumental in getting the transit-aid program launched in the first place seeing it through the appropriations wars on Capitol Hill and creating the machinery to run it smoothly.

The big problem—no surprise—has been the lack of money to do it right, in other words, on a big scale. The

Car orders dipped in 1967 — but will climb back up in '68

Transit, commuter, HSGT car orders in 1966

System	No.	Builder	Description
Canadian National	35	United Aircraft-MLW	TurboTrain (aluminum)
Chicago & North Western	16	Pullman-Standard	Commuter cars (steel)
Cleveland Transit System	20	Pullman-Standard	Transit cars (stainless steel)
Delaware River Port Auth.	75	Budd	Transit cars (stainless steel)
GO Transit (Toronto)	25	Hawker-Siddeley	Commuter cars (aluminum)
New Haven RR*	6	United Aircraft-Pullman-Standard	TurboTrain (aluminum)
New York Transit Authority	400	General Steel Ind.	Transit cars (composite construction)
Pennsylvania RR*	54	Budd	Metroliners plus 4 non-revenue test cars (stainless steel)
	631		

*DOT-sponsored high-speed ground transport program.

Transit, commuter car orders in 1967

Long Island Rail Road	270	Budd	Commuter cars (stainless steel)
Pennsylvania RR	35	General Steel Ind.	Commuter cars (stainless steel)
South Pacific Ry	15	Pullman-Standard	Commuter cars (steel)
	320		

Firm orders or commitments in 1968

Bay Area Rapid Transit	250		First portion of 450-car order
Chicago & North Western	15 20		Commuter Cars
Chicago Transit Authority	150	Budd	New line extensions
Massachusetts Bay Transport. Auth.	76	Pullman-Standard	New line extensions
New York Transit Authority	600		Regular replacement
	1091-96		

Other short-term prospects (1968-70)

Atlanta (MARTA)	186	First phase requirement
Baltimore (MTA)	160	First phase requirement
Bay Area Rapid Transit	200	Second phase requirement
Chicago Transit Authority	300	New lines plus replacements
Delaware River Port Authority	25	Predicted service requirements
Erie-Lackawanna RR	255	State-sponsored commuter-car replacement program
GO Transit (Toronto)	25	Predicted requirement
Illinois Central RR	130	11 communities organized agency to sponsor program
Long Island RR	350	Second phase requirement
Los Angeles	475	First phase requirement
New Haven RR	144	State and federal aid
New York Transit Authority	800	Based on average of annual replacement figures
Pennsylvania RR	91	SEPTA's short-term commuter car replacement program for 80 Philadelphia suburban cars; 11 high-speed cars for service to Harrisburg
Philadelphia (PTC)	215	New line extensions, foreseen replacement requirements
Pittsburgh (PAT)	125	Plans now being revised
Seattle (Metro)	300	First phase requirement
Toronto (TTC)	138	Planned extensions
Washington (WMATA)	184	First phase requirement
	4103	

usual causes get blamed: the Viet Nam war, inflationary pressures that have put Congress in a cost-cutting mood, the indifference of rural legislators who see 20th Century urban congestion in 19th Century horse-and-buggy terms.

• **No hike in spending.** For the time being, authorizations for federal aid to mass transit will, by all accounts, remain at about their present levels—$175 million a year. The Department of Housing and Urban Development asked for an advance authorization in FY 1969 of $230 million, which the House cut back to $175 million. The Senate reluctantly fell into step with the House. Barring the unforeseen, the purse strings on federal money will be held about as tightly or as loosely as before.

Everyone in the transit industry can be glad the program is there, but that won't prevent a twinge or two of regret that it isn't far bigger than it is, in view of the pressing nature of urban transportation problems. In the absence of manna from either heaven or Washington, many cities—and some states,

Pay-as-you-go bonds generate billions

too—are moving toward more self-help measures.

• **Do-it-yourself plans.** Just in the last few months, three cities—Seattle, Los Angeles and Washington—unveiled billion-dollar plans for building new transit systems (RA, Nov. 6 p. 24). In the case of Seattle, an earlier, cheaper plan for a 19-mile system was scrapped because it was considered too small in scope (the new one calls for 45 miles). In the case of Washington, the new scheme grafts plans for a 70-mile suburban network onto existing plans for a 25-mile city system, once again because the scope is otherwise too limited.

It has to be conceded that these plans bank heavily on forthcoming federal assistance. The significant thing is that local officials who are used to thinking in terms of a 90% federal contribution for local road-building, have faced up to the necessity for transit, even if the local contribution has to be appreciably higher—a 33% share of the costs. That's the way the law is written at present; they know it, and in the absence of alternatives, they are living with it.

A referendum comes up in February in Seattle on a bond issue that would finance the local share of the costs of construction in the first phase. In Los Angeles, officials are shooting for a bond-issue referendum next November, once again to finance first-phase construction on their 62-mile network. Congress is expected to authorize construction appropriations this year for the initial phases of the Washington system —also to be matched by local contributions.

The situation is not too different in Atlanta, where a feasibility scheme of five years ago has been updated. The plan calls for a 52-mile system to be built in two phases—a close-in, 30-mile system initially, the rest later. Here, too, voters will be asked to pitch in a good part of the money through a referendum on a bond issue, probably in November 1969.

An earlier feasibility study for Baltimore is now being updated; the one in Pittsburgh is being revised to make room for the Skybus scheme of Westinghouse Electric. Other feasibility studies are under way in Miami, Houston, Detroit, Toledo and Rochester. Still other cities—in fact, practically every U.S. city with a population over 700,000—is either in the midst of negotiating such studies or considered very close to doing so. As in the other cases the basic assumption is that the rich uncle in Washington will lend a hand, but a substantial share of the financing will be strictly Dutch treat.

• **State initiatives.** The traditional pattern for cities seeking additional funds has been to bypass state houses and head for Washington, hat in hand.

The general feeling in the big cities is that state legislatures are too often rurally dominated, and when money comes, it is doled out skimpily.

That pattern is changing, in some cases dramatically. Massachusetts showed the way in 1964 when the state legislature authorized a $225 million bond issue to help Boston-area mass transit. The Massachusetts Bay Transportation Authority was created and the authorization has since gone to $369 million.

Only last November the State of New York took an even bigger step when voters approved a $2.5 billion transportation bond issue, actively campaigned for by Governor Nelson Rockefeller.

Looming in the background is a new East Side subway for the New York City Transit Authority, some extensions in Queens, and a possible spur of the Long Island Rail Road (now state owned) to Kennedy International Airport. The amount of money involved is on the order of $800 million, of which perhaps $600 million might come from the bond issue.

On March 1, the MCTA becomes the MTA—Metropolitan Transit Authority—and takes over policy planning and control of the New York subways, in addition to the Long Island Rail Road, and will prepare for the acquisition of the New Haven's commuter operations, as well.

As an immediate step, Governor Rockefeller asked the state legislature to authorize $131 million worth of allocations from the bond issue, to be matched by federal and local funds, as follows:

—$63 million toward the $84 million cost of buying 350 new cars for the Long Island Railroad. An original requirement for 500 new cars has since been raised to 620, of which 270 were already ordered).

—$37.5 million, or 50% of cost of design and construction of the NYCTA's coming East River tunnel.

—$19.7 million toward the $49 million cost of renovating the Long Island Rail Road's electrification system and extending it 16 miles. Matching this would be a $22.7 million federal grant and $6.5 million from the state's Metropolitan Commuter Transportation Authority.

—$4.7 million for rehabilitation of the LIRR's physical plant, including new stations, tracks, signaling. The MCTA would put up $1.5 million.

—$6 million toward acquisition of commuter facilities of the New Haven, with the MCTA adding another $2 million. As a stop-gap measure, while awaiting outcome of litigation over the Penn-Central merger, two federal agencies, HUD and DOT, approved $28.4 million to tide the road over; eventually, the MCTA and its counterpart Connecticut Transportation Authority will take over the NH commuter operation. The NH should soon be able to purchase 144 new cars to replace its aging rolling stock.

• **On the West Coast.** Looking strongly to the state of California for additional aid is the Bay Area Rapid Transit District, which estimates that it will need up to $160 million more to complete its 75-mile network.

In spite of a setback in the legislature at the last session, it's believed the chances for favorable action have improved and will most likely take the form of an additional tax.

Meanwhile, over 80% of the BART system is either in the final design or the actual construction stage. Building of the Trans-Bay Tube is now far advanced, and a car order of 250 vehicles will soon be negotiated.

• **The long view.** The upshot of all this is that the money to finance new systems and improvements to old ones is not about to be tapped from any single source. As before, it means organizing an effort to rouse local citizens, to reach state legislators, and continued reliance on federal aid, even in its limited present form.

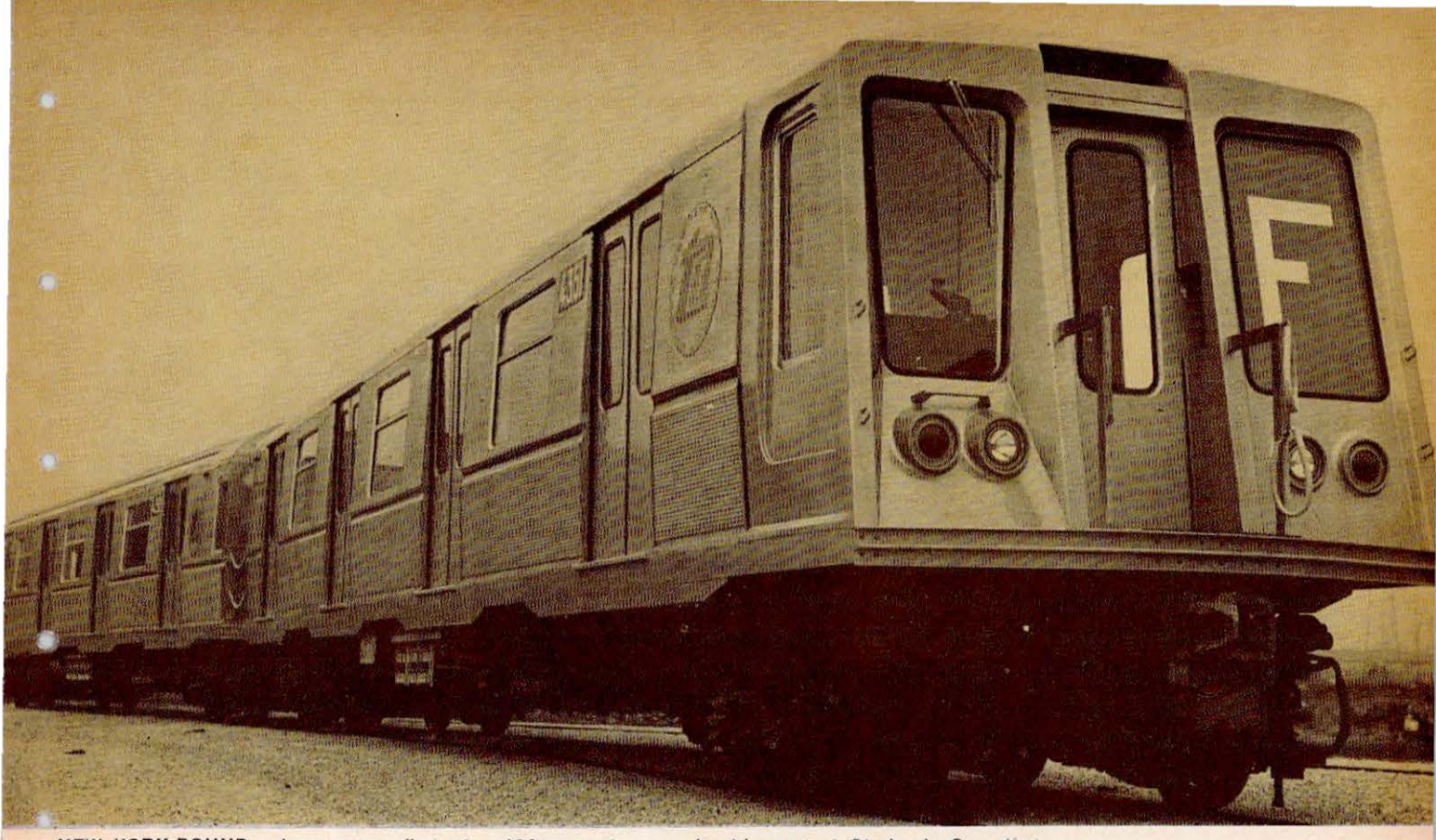
None of the big changes will come overnight, but the following facts are worth pondering:

—Capital expenditures for rapid transit, either committed or authorized at the present time, have now reached $2.25 billion, according to the Institute for Rapid Transit.

—The U.S. population has just crossed the 200-million mark, and is headed for the 235-245-million range by 1980, according to the U.S. Bureau of the Census.

—The urban population of this country, already predominant, will constitute 85% of the total population by the year 2000, according to the Urban Land Institute.

Stated another way, this means that the need for improved and expanded urban transport facilities will keep increasing—and the already rising amount of money going into these improvements must climb sharply, too. ■



NEW YORK-BOUND subway cars—first of a 400-car order—await shipment at St. Louis Car plant.

New cars for a happier New Year

St. Louis, one of yesteryear's embarkation points for wagon trains of prairie schooners heading west toward the wilderness plains, is about to see more trains of "schooners" moving out—only eastward, this time.

The destination is New York (hard-

PASSENGERS will ride in clean comfort on the new cars. Two hundred of the units will be equipped with air conditioning.

ly a wilderness). And, the "schooners" —sleek, futuristically-designed subway cars of stainless-composite construction —aren't likely to work any hardships on the thousands of straphangers awaiting their arrival. As a matter of fact, the 400 cars, now being built by St. Louis Car division of General Steel Industries for the New York City Transit Authority, under contract R-40, should provide downright pleasant riding for the subway patrons.

● **Air conditioning for 200.** St. Louis Car will be delivering the first group of R-40 cars any day now, and hopes to ship the entire order at the rate of 30—or maybe 40—per month. St. Louis Car officers are anxious to complete the first half of the order before summer arrives, because the second 200 cars will be air-conditioned. But they're no more anxious than New York's Mayor John Lindsay who stated earlier that he would like to see the cars on line as soon as possible to cool the "hostility index" of transit riders.

New order due

Meanwhile, even before the first 10-car shipment of R-40 cars is out of sight of St. Louis' famous 630-ft steel-and-concrete "Gateway Arch," the NYCTA could be opening bids on another order (Contract R-42) for 200 air-conditioned cars for 1969 delivery. Bid opening is scheduled for Jan. 15 in New York.

So, St. Louis Car is wearing two hats these days—one as a bidder on the impending R-42 order, and the other as builder of the 400-car R-40 order. The R-40 cars now in production are, to a certain extent, quite similar to the 200 R-38 cars built in 1966 for New York by St. Louis Car. Power and braking systems, general structure, interior appointments, seating arrangement, passenger capacity and function are almost identical.

● **The difference is outside.** Aside from the all-important air-conditioning of the final 200 cars in the order, the big difference between the R-38 and the R-40 is external design. The R-40's windows are much larger and the corrugations in the stainless steel sheathing below the window line and between the side and end sills are much smaller. But the most noticeable styling change is in the front ends of the cars. The R-40 got a nose job . . . and its whole personality has changed.

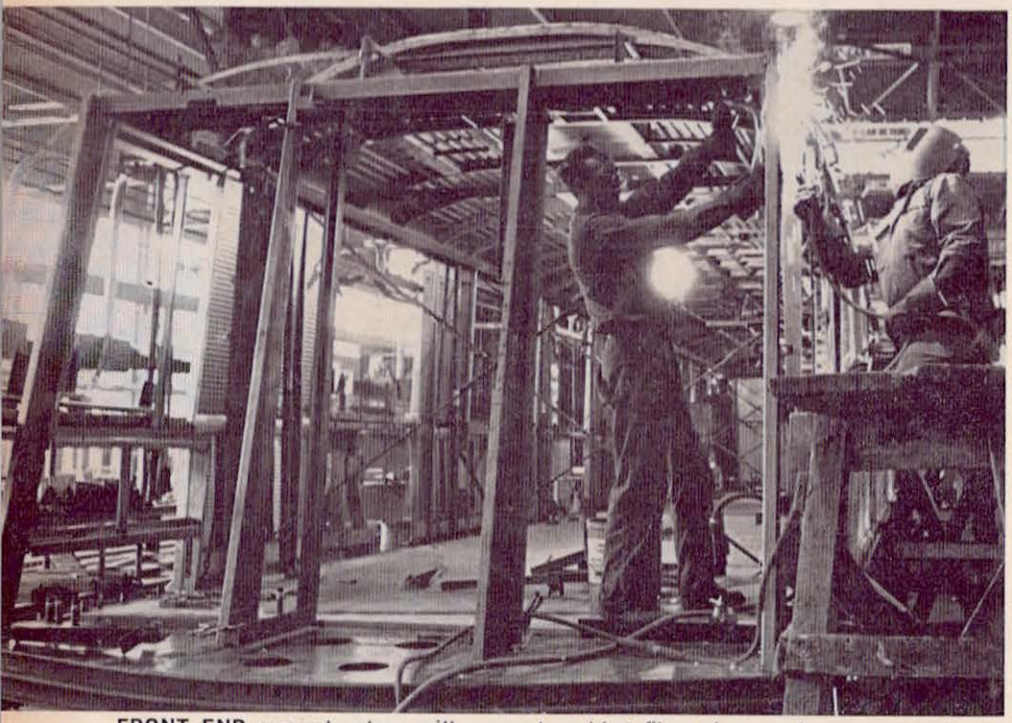
In cooperation with NYCTA engineers, the industrial design firm of Raymond Loewy/William Snaith, Inc., worked out the new styling. Unlike the perpendicular front ends of the R-38 cars, the R-40 front ends rake back ten degrees, giving the car an appearance of being in motion even while standing still. Back when the NYCTA announced its intention of seeking bids on the R-40 cars, it advised bidders that design would be a major evaluating factor because "cosmetic appeal of car exteriors can affect rider acceptance."

The newly-styled front ends are constructed of built-up molded fiber glass plastic. St. Louis Car is forming the ends in its own shop in an area expanded recently for this type of work. In addition to the ends, the builder is also forming interior window frame trim as well as other interior trim items, vertical posts at both ends of the cars and battery boxes. All the longitudinal seats in the cars are made of fiber glass, too.

● **Small changes inside.** Some minor changes were made in interior design of the R-40. The ribbed ventilating grills were modified slightly, light diffusers were squared rather than rounded and ceiling panels along the centerline of the car were designed so that no fasteners would be visible.

The head and tail lights, mounted vertically on the R-38 cars, are seated side-by-side in the R-40's molded fiber glass front ends. Because of the wide gap which will exist when the sloping front ends of cars are coupled in a consist, stainless steel railings with accompanying safety chains were installed at the front end platforms. Also because of the longer gap, pantograph gates were eliminated and replaced with safety springs.

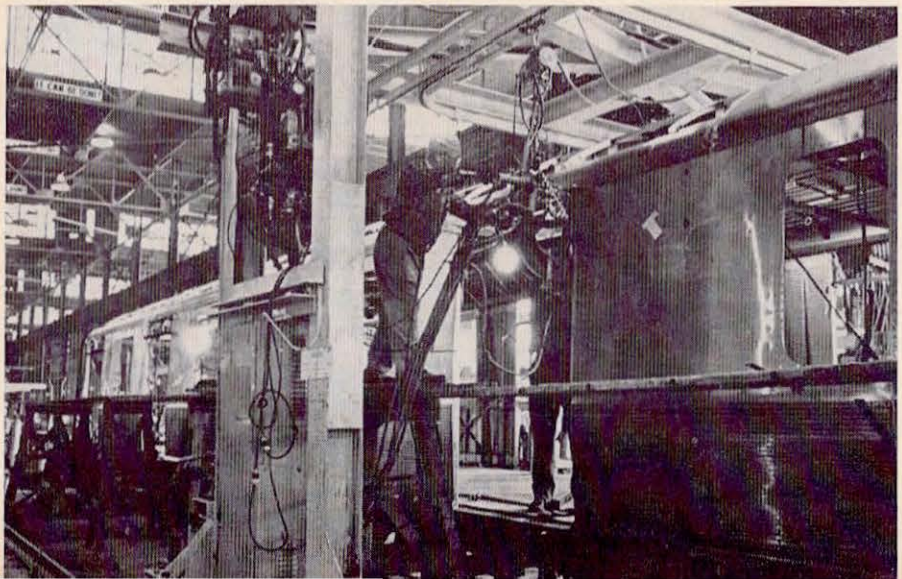
● **Research is constant.** The R-40 is an excellent blend of several types of



FRONT END superstructure will support molded fiber glass end.

New York's cars take shape in St. Louis

CAR EXTERIOR has stainless steel sides, high-tensile steel roof.



steel, and aluminum and fiberglass. "We're constantly examining the components which make up the car, seeking to put the most functional material in places where it will do the best job," says William Kamman, St. Louis Car's senior vice president. "Of course, no material, no matter how economical or attractive it might be, would be used in any part of the car if it could affect passenger safety or the reliable operation of the car," he added.

Side sills, center sill and body bolsters are made of T-1 high strength steel, with other underframe and body-frame members, as well as the main roof, made of low alloy-high tensile (LAHT) steel. Both the corrugated and flat side sheathings are stainless steel, and the auxiliary roof is aluminum. Like the R-38, the R-40 is 60 ft, 2 1/2 in. long over anticlimbers, 10 ft wide over door sills and 12 ft, 2 in. from rail to top of roof.

The NYCTA cars operate as married pairs, with an A and a B car semi-permanently coupled. Both cars are almost identical, except that the A car carries the two units' batteries and the B car carries the compressor.

Major alterations will be required inside the cars and in the underframe area. To operate the 18 tons of air-conditioning, each car will be equipped with a pair of compressor-condensers mounted beneath the car at strategic points to assure proper balancing. Addition of these units will bring about extensive rearrangement of underslung equipment.

Cooling and evaporating components for the air-conditioning units (2 per car) will be mounted inside and at the ends of the cars. Ductwork linking the two units will be installed between the ceiling and the main roof. St. Louis Car engineers designed the ductwork so that it is divided diagonally. According to Kamman, this method will permit at least partial comfort throughout the car even if one of the two units should stop functioning.

600 cool cars by '69

Heating coils will be installed with each air-conditioner. These coils will aid in controlling humidity when the units are operating and will operate alone to provide warm air in cooler weather. The six ceiling-mounted circulating fans in the first 200 cars will be eliminated in the cars equipped with air-conditioning.

Mayor Lindsay announced last month that New York City can expect to have 600 air-conditioned subway cars by the end of 1969. The 200 cars in the R-40 order and the 200 cars in the upcoming R-42 contract will account for two-thirds of this announced total. ■

LUTHER MILLER

AS THE EDITOR SEES IT...

OUT WITH THAT SAD OLD YEAR—It is traditional, at this time of year, to count one's blessings. For editors, this usually means browsing through last year's bound volumes and picking the Ten Top Stories of the Year. Frankly, we find last year's volumes more than a little depressing. Everything seemed to be in short supply except bad news. Down, down, down went carloadings, revenues, and hopes for a recovery from the doldrums that set in late in '66. Up, up, up went wages, costs and tempers. The year was not nearly as bad as a lot of the breast-beaters seemed to think, but it was bad enough.

And enough is enough. Forget '67. What about the Ten Top Stories of '68? What glad or ominous tidings will fill our pages as the New Year unfolds?

At a time when the year is still too young for a reasonable man to be anything but optimistic, when the forecasts can be just what we want to make them, the following candidates are offered for the stop-press columns of '68.

AND IN WITH '68—1. Class I railroads, which ordered only about 50,000 new freight cars in 1967, will place orders for at least 75,000 new cars in 1968—in belated recognition of the fact that it's hard to persuade shippers to put freight in cars you haven't got.

2. The high-speed "Metroliners" and "TurboTrains" will go into service in the Northeast Corridor sometime in the spring. An initial period of enthusiasm, mutual good-will and a 99.7% load factor will be followed by complaints that the ride is still too slow, the dining-car stewards still deficient in the arts of gracious living, and the hamburgers still overpriced. But after the shakedown period, the new trains will be pronounced a great success, Eastern Air Lines will curtail its shuttle services and buy railroad stocks, and President Johnson will campaign for re-election on a platform of "a train in every corridor."

3. The Pennylvania-New York Central merger will be consummated early in the year, and out of the honeymoon will come the first of our great super-railroads. The labor organizations will wonder why they ever called this a PANYC affair. The western roads will be so impressed that they will come up with a master western merger plan.

4. "On time, every time" will become the unofficial marching song of railroad operating officers, replacing that old favorite, "Sometime, somewhere."

5. The Association of American Railroads will reinstate its national advertising campaign, and newspaper and magazine readers will find out that there's something more to transportation than Northeast Yellowbirds and P.I.E. double-bottoms.

6. Railroads will step up their fight for the right to operate as transportation companies, bringing rail, air, waterway and highway technology together into a single efficient package. Failing this, they will adopt the slogan, "If you can't join 'em, lick 'em," and will become more fiercely competitive than ever on their own terms.

7. Containerization and piggyback will learn to live together and like it, and both will grow and prosper.

8. Railroad research men will stop dealing with yesterday's problems long enough to look at tomorrow's, and will come up with a fully automatic coupler, on the theory that all of this automation doesn't make a lot of sense when a highly-paid worker still has to couple air hoses with his hands.

9. The collapse of half a dozen suspension bridges will cause state legislatures to engage in a mass repeal of double-bottom laws.

10. The San Francisco Chronicle, in a fit of perspicacity, will nominate BART General Manager Bill Stokes as Transit Man of the Year.

So there you have our predictions for the New Year. If some of them carry more hope than conviction, why not? 'Tis the season to be bullish.

SOLVING A WATER PROBLEM in a canal-laced country, Dutch engineers used prefabricated tube sections for Metro.

Rotterdam gets a transit system

Residents are looking forward to the opening of the nation's first Metro system next month.

The Dutch have been justly famed for centuries for reclaiming land from the sea. They're still doing it—only now it's for building a new rapid transit system in Rotterdam.

Set to open next month, the Rotterdam Metro demonstrates that an underground rail system is practical even where the land is criss-crossed by rivers and canals, and in many cases lies below sea level.

Europe's biggest port and a city with a population approaching one million, Rotterdam is bisected by the Maas River (one mouth of the Rhine), and is marked by numerous man-made waterways.

The main business district lies just to the north of the river, the biggest series of shipping berths line the south bank, and an important residential district lies still further south.

Some improvement of public transport was deemed essential, since the main highway bridges, and even a bicycle bridge, were getting hopelessly clogged at peak travel periods.

● **Engineering problems.** A rapid transit system was decided upon, but there were a number of engineering difficulties to be faced. For the river crossing, trenches resting on special pilings were dug under water. The two parallel tubes, one for each track, were prefabricated section by section, towed to the site by barge, then sunk into position. Rubber sealing was used inside and out to make the links between sections watertight.

METRO STATIONS are well-lighted, smartly designed in vivid colors.

So far, construction was difficult but not unusual. Far more novel was the problem on the north side of the river. Here, in the main business section, lie many old buildings resting on wooden piles. Mechanical pumping dry of the soil, then boring, was possible in theory, but ruled out as risky for the foundations of these buildings.

Floating tubes

Instead, cut-and-cover trenches were dug through streets along the projected route, and lined with steel. At one end, tube sections just like those used under the river were constructed. The "dry-docks" were then filled with water, and each tube section was floated in sequence into place.

South of the river, the engineering task was more straightforward. The line emerges from the tube, mounts a viaduct down the middle of a broad thoroughfare, and ends up at the Zuidplein, the southern terminus.

● **Operations.** Service on the RET (Metro) will begin with 27 two-car articulated carsets. Trains will consist of either a single set, or, at peak periods, of multiples up to four. Total passenger capacity of each carset is 276, standing and seated (seating is both transverse and longitudinal).

Car-bodies are lightweight steel, with abundant use of plastics and fluorescent lighting to give interiors an airy, modern look.

Power supply will be 750-v dc, collected from a third rail. Top speed will

be 50 mph. Trucks are equipped with disc brakes, and braking will be electrodynamic, with pneumatic brakes serving for auxiliary or emergency purposes.

Cab signaling and automatic overspeed control will be used to run the trains with motormen, but not conductors. This also opens the way for completely automatic train operation, eventually.

Heating elements will keep the cars warm in winter, and while air-conditioning is not a matter of towering urgency during Dutch summers, there will be thermostatic controls to automatically adjust ventilation, as needed.

Service will be at three-minute intervals between the seven stations, four underground and three above the surface. The northern terminus, at the Centraal Railway Station of the mainline railways, is the only station with an island platform; all other have side platforms.

Continuous-welded rail is used to insure smooth riding. The rail is fastened directly to a concrete deck (roadbed), and noise insulation is assisted by use of thick cork-rubber plates.

● **Fare collection.** Automatic equipment is used for ticket-taking, as follows: Automatic money-changing machines are located in each station-access area. Riders purchase tickets from automatic vending machines, present them at a turnstile, where the recognition strips of coded, metallized inks on the tickets are read, the turnstile unlocks and passengers go through to the platform area.

● **Visual design.** Much thought clearly went into making the station environments attractive. Sub-surface stations are well lit with fluorescent lighting, and vivid colors are used for wall panels. Sub-surface stations have corridors lined with shatterproof colored glass-fiber panels.

The southern terminal at Zuidplein is a tri-level structure, highly functional in the current international style, but also pleasing to the eye, inside and out.

Trains come in on the top level, feeder buses serving other areas of the south bank come in on the middle level, and pedestrians from the bottom level on the street. Access is by both stairs and escalators.

● **Line extensions.** The line opening at present is 3.7 miles long. But civic and RET officials are agreed this is just the beginning. As it is, the southern terminus is a provisional one, for trackage actually extends a quarter-mile further south, to where another station will be built. On the drawing boards are plans to extend this line a few miles still further south at a later date, and then to add a bisecting east-west line. ■

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

INNOVATIVE MERGER DEVICE—The ICC's 1968 chairman, Commissioner Paul J. Tierney, thinks the Commission should first issue only tentative decisions in railroad merger cases. His proposal contemplates denying final approval of mergers until related cases are decided and implementation of all imposed conditions gets under way with consummation of the merger.

Tierney unveiled his plan in the dissenting opinion which he filed when the Commission approved the Northern Lines' merger last month. In permitting consummation of this merger, the majority "tossed away a golden opportunity to exercise meaningful control over the pending western merger proceedings," the dissenter says. He recognizes that his "innovative procedural device" would preclude immediate consummation of an approved merger. But he suggests that time might be saved in the long run because interested parties, not knowing the outcome of the other cases, can now thwart prompt consummation by instituting lengthy court proceedings.

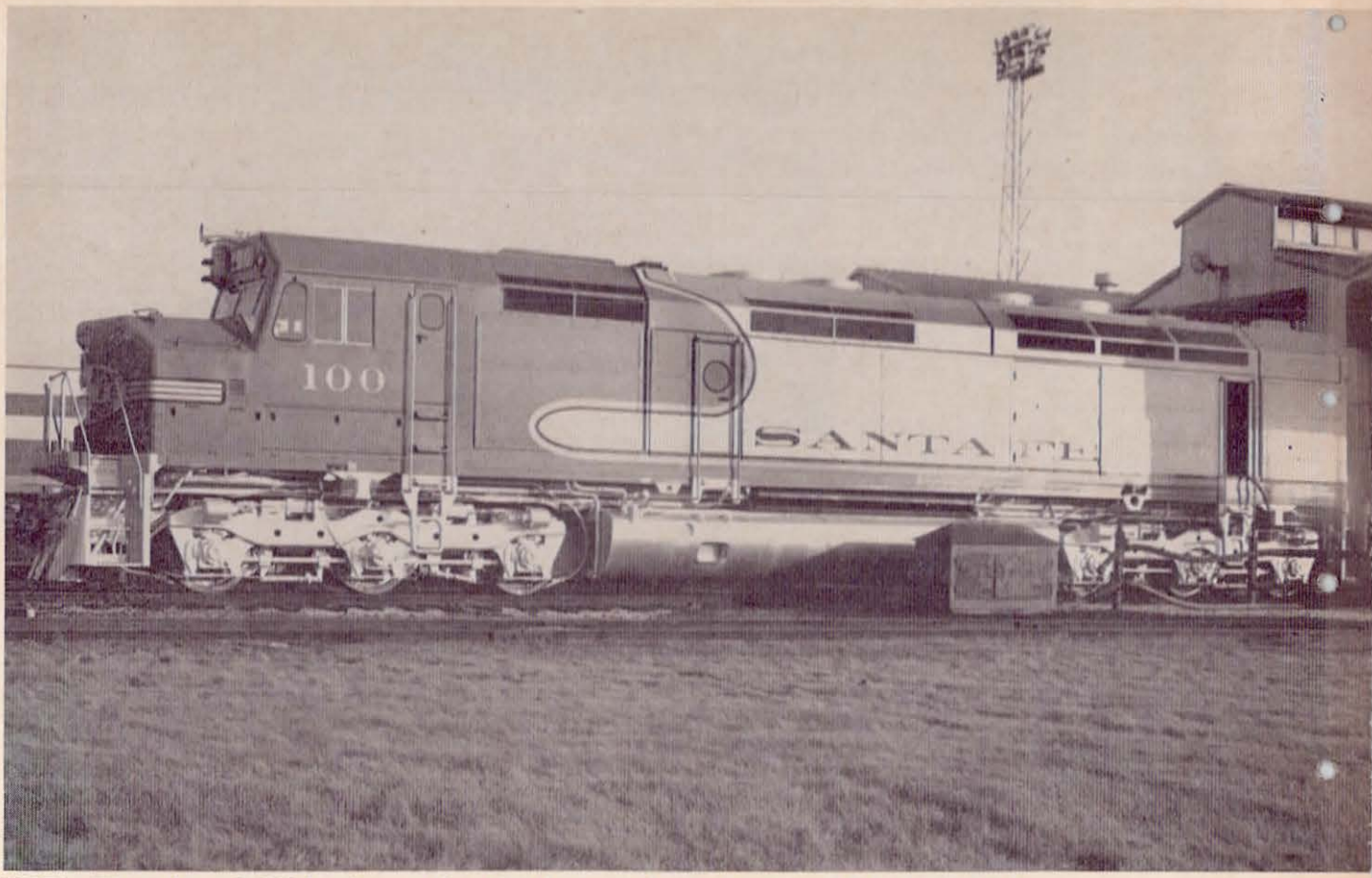
ADVANTAGES—As Tierney lines up its advantages, the tentative-decision plan would: (1) enable the Commission to view the western merger picture in a more realistic perspective; (2) inform all parties of Commission views with each tentative decision; (3) allow the Commission to provide appropriate relief from the adverse cumulative and cross effects of a second and third merger in combination with the first—before the initial merger is firmly cemented; (4) insure that effective rail competition remained in the northern and central corridors after consummation of any merger.

If final Commission orders were then challenged, Tierney suggests the courts would gain a total, as opposed to a fragmented, picture of considerations guiding the Commission. Meanwhile, he emphasizes that he does not consider his proposal a merger-moratorium plan or a call for consolidation of the pending western proceedings.

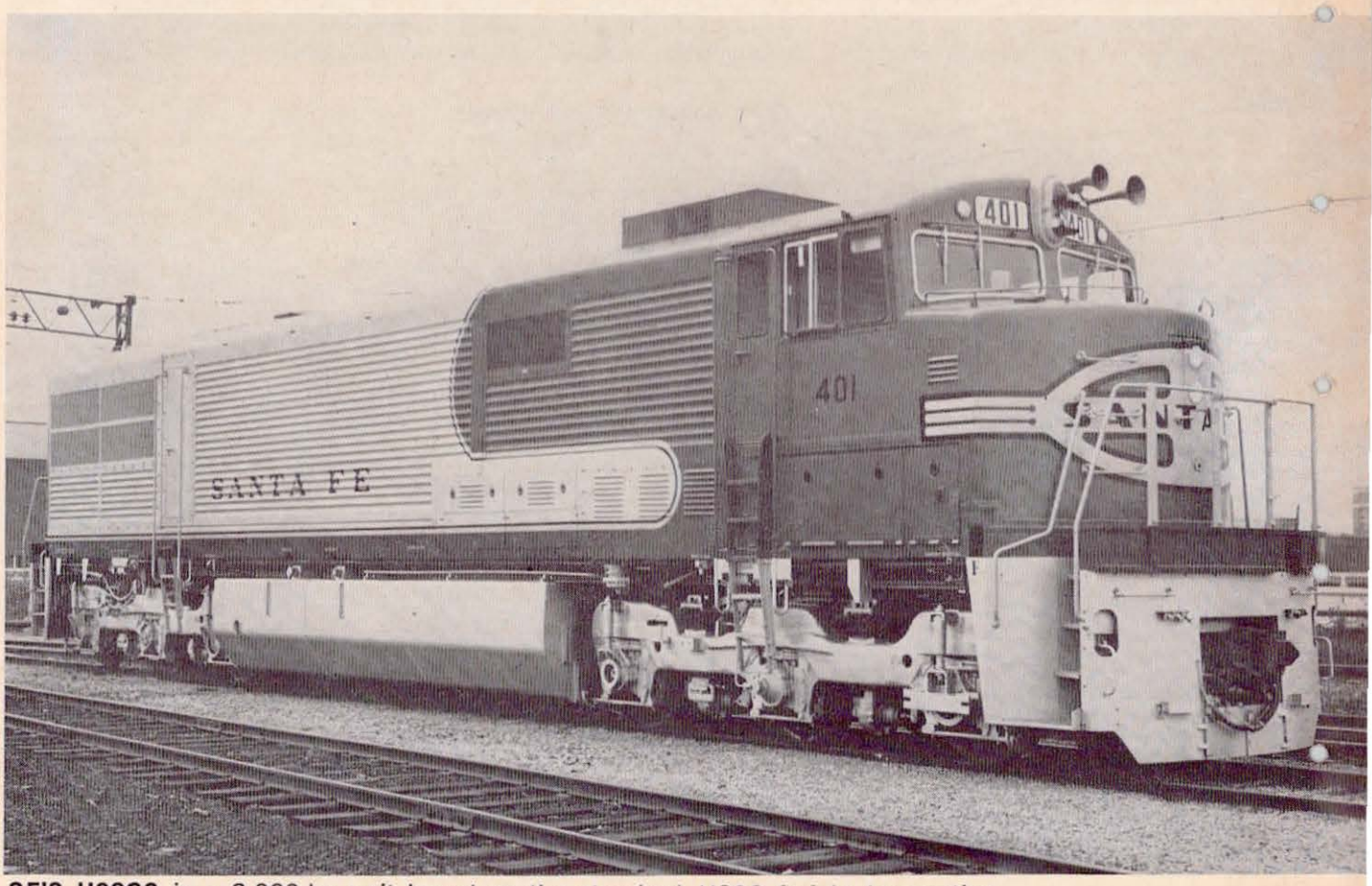
ON CONDITIONS SUBSEQUENT—Noting the majority's broad reservation of jurisdiction to impose future conditions in the Northerns case, Tierney goes on to express his low opinion of that conditions-subsequent plan. Use of it, he thinks, entails unnecessary risk that the courts will remand the case of reconsideration in conjunction with other western proceedings, or they will affirm the Commission's order but strike down some of the conditions imposed after consummation of the merger. "Moreover," he adds, "we have no assurance at this time that we can draft conditions subsequent in the public interest which will be acceptable to all parties."

LESSONS OF EXPERIENCE—The Commission's experience, as Tierney reviews it, indicates that, when consummation is permitted, there is little likelihood of enthusiastic acceptance of later imposed conditions. He cites Penn-Central as a case which demonstrates that conditions required as a prerequisite to consummation "are excellent administrative tools." He has in mind the divestiture by Pennsylvania of its Norfolk & Western holdings and its offer to sell Lehigh Valley, and Penn-Central's agreement to take over the passenger as well as freight business of the New Haven.

Tierney contrasts such uncontested acceptance with what is happening with respect to the conditions subsequent imposed in the N&W-Nickel Plate case. He points out that N&W was allowed to consummate this merger several years ago—"but it is still contesting the inclusion of Erie Lackawanna, Delaware & Hudson and Boston & Maine." He does not challenge the Commission's power to impose conditions subsequent. His advice is that the tentative-report-all-conditions-precedent approach would be easier for the Commission and fairer to merging roads and other interested parties.



EMD's FP-45 is a 3,600-hp locomotive that is an enlarged version of GM's SDP-45.



GE'S U30CG is a 3,000-hp unit based on the standard U30C freight locomotive.

New carbody units serve dual purpose on Santa Fe

GE- and GM-produced locomotives, useful for both passenger and freight operations, have many other attractive advantages.

SANTA FE MEN inspect EMD's unit—(L to R) J. C. Davis, vice president; J. S. Reed, president; E. S. Marsh, chairman. B. B. Brownell, EMD general manager, is at the right.

The new year found a group of new locomotives in Santa Fe road service. They are not, like most such deliveries today, "just more of the same." The 15 new units—six General Electric and nine General Motors—were designed by the builders to Santa Fe specifications. They are regarded by the railroad as fitting its requirements for passenger and freight power in the years ahead.

Just what are these requirements? The most obvious departure is the streamlined carbody configuration which is something Santa Fe regards as increasingly important as train speeds are stepped up. The ability to handle either freight or passenger trains is satisfied with the high-capacity steam generator and the large motor capacity available in the three-axle, fully motorized trucks.

● **Two new models.** To fill the Santa Fe's needs, GE has produced its 3,000-horsepower U3OCG; GM has the 3,600-horsepower FP-45. The dual-service GM unit has been added to the standard line produced by the Electro-Motive Division.

That a railroad could persuade the builders to produce customized carbody configurations in this era of extreme diesel-electric standardization is somewhat of a landmark in itself. Not since Union Pacific sought (and got) two-engine 5,000 to 6,000 horsepower road freight units, starting in 1963, have there been many departures from the single-engine road-switcher design.

● **What it takes.** The pending reductions in Santa Fe passenger service and the inaugural next week of the "Super C" trailer-container freight train on a virtual passenger schedule (RA, Dec. 8/25, 1967, p.11), point up the wisdom of the requirement for dual-service capabilities in new motive power. Probably there will be considerable testing of the U3OCG and FP-45 units before they are given fixed assignments in the road's overall operations. Santa Fe has indicated that there could be more than sheer horsepower in the successful operation of high-speed freight trains. In either freight or passenger service, the streamlined carbody design will reduce air resistance and give vital components better protection from moisture, dirt, rain and snow.

Access to equipment has been greatly improved from the standpoint of inspection, maintenance and repair, according to AT&SF mechanical officers There is now walk-through access to the engine-rooms and easier passage between coupled units. Another advantage is the ability to clean the carbody units in rotary-brush washing facilities, eliminating much of the manual labor required with road switchers.

Commenting on the new units, a Santa Fe spokesman says that "this type of locomotive is another milestone in the evolution of motive power and could well make its mark in freight service."

● **Pattern for future?** The freight service of the coming decade might be patterned after the "Super C" freight train which goes into service Jan. 17 in both directions between Chicago and Los Angeles. This train, on a 40-hour schedule which cuts 20 hours off the previous timing for 2,220 miles, will handle trailers and containers only—at premium rates. Santa Fe officers see this service as giving it new competitiveness versus highway and airway competition.

The daily-except-Sunday departures from the two terminals will provide Plan 2½ and Plan 3 service at $1,400 per trailer or container loaded to 35,000 pounds with an additional charge of $4 per hundredweight for any excess. Chicago departure is to be 2 p.m., with second-morning arrival in Los Angeles at 4 a.m. Eastbound service leaves Los Angeles at 10 a.m. and arrives in Chicago second morning at 4 a.m. Santa Fe stresses its long experience with high-speed freight and passenger trains in assuring the reliability of the new service.

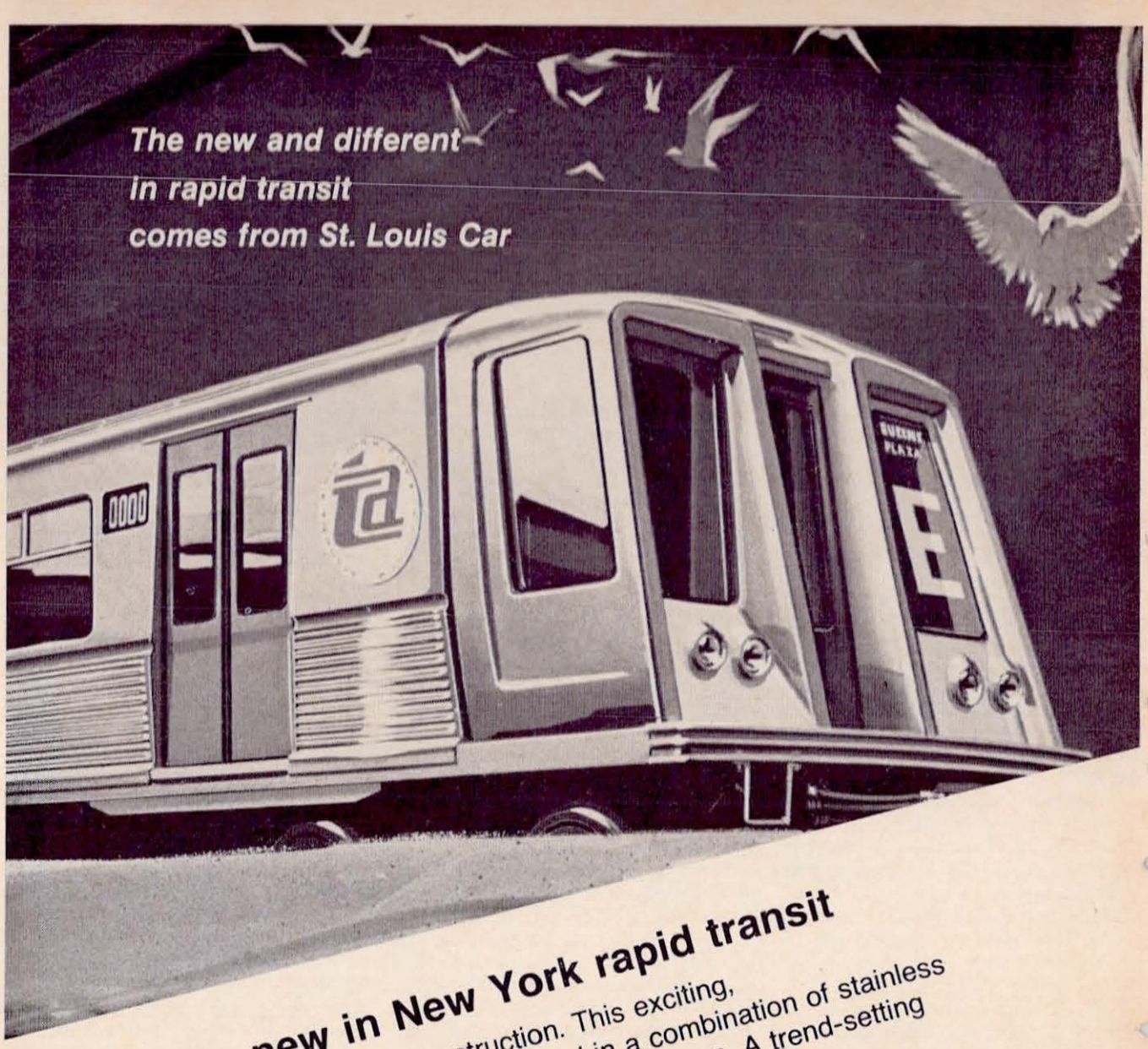
With its freight speeds increasing and approaching those of passenger trains, AT&SF decided it was time for a locomotive that could pull either. Confronted with such a requirement, GE came up with the U3OCG, which is based on the standard U3OC freight unit and has the same over-all length. Prime mover is the standard turbocharged, four-cycle FDL-16 engine. The ac/d-c transmission powers six Model 752 traction motors through the GTA-9 alternator and rectifiers.

The GM locomotive is an enlarged version of the SDP-45. In the initial design stages the carbody was lengthened about 5 feet over that of the basic SDP-45. To meet the dual-service requirements, crossover end platforms and sill steps were added subsequently at each end. This increased the final length to 72½ feet over coupler pulling faces.

● **Largest boiler capacity.** All 15 units have been fitted with the new Vapor Model 6547 steam generator with a 6,900-pound-per-hour capacity, claimed to be the greatest boiler capacity ever installed in a diesel passenger locomotive unit. Standard, also, are the Vapor Alertor surveillance control, the Barco speed recorder and indicator, and test harness for the Dalmo-Victor Search automatic testing equipment.

Each unit has a weight on rails of approximately 400,000 pounds. The Santa Fe specified minimum requirements of 2,000 gallons of fuel oil and 4,000 gallons of water for train heating.

The locomotives are geared for a top speed of approximately 95 miles per hour. The modified carbody design has been the product of numerous conferences between the road's officers and the locomotive builders. It has been about a decade since the last streamlined road passenger locomotive was produced. Production of the streamlined road freight locomotive had been terminated a few years earlier by introduction of the road switcher. Depending on the success of the new road units, streamlining might be on its way back. ■



The new in New York rapid transit

New design. New construction. This exciting, into-the-future design is shaped in a combination of stainless steel, LAHT steel, aluminum and fiberglass. A trend-setting concept! And it brings to NYCTA many other passenger-pleasing ideas for comfort, quiet and safety. The order is for 400 cars . . . to be built by GSI–St. Louis Car Division. Design is by Raymond Loewy/William Snaith, Inc.

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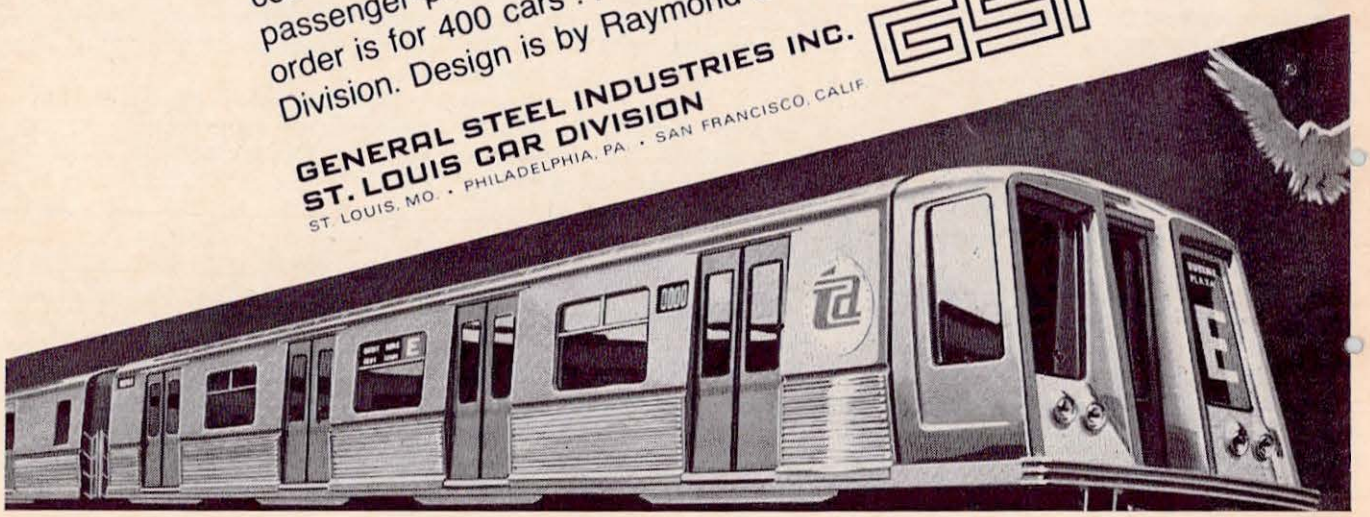


D&RGW offers new computer service

Denver operation helps customers solve problems easily.

Chemicals, real estate and manufacturing all are proven paths of diversification, but last month Denver & Rio Grande Western programmed itself into a slightly different route—computers. The company opened Denver's first commercial service in computer time-sharing. It's a new D&RGW division called Computer Sharing Services.

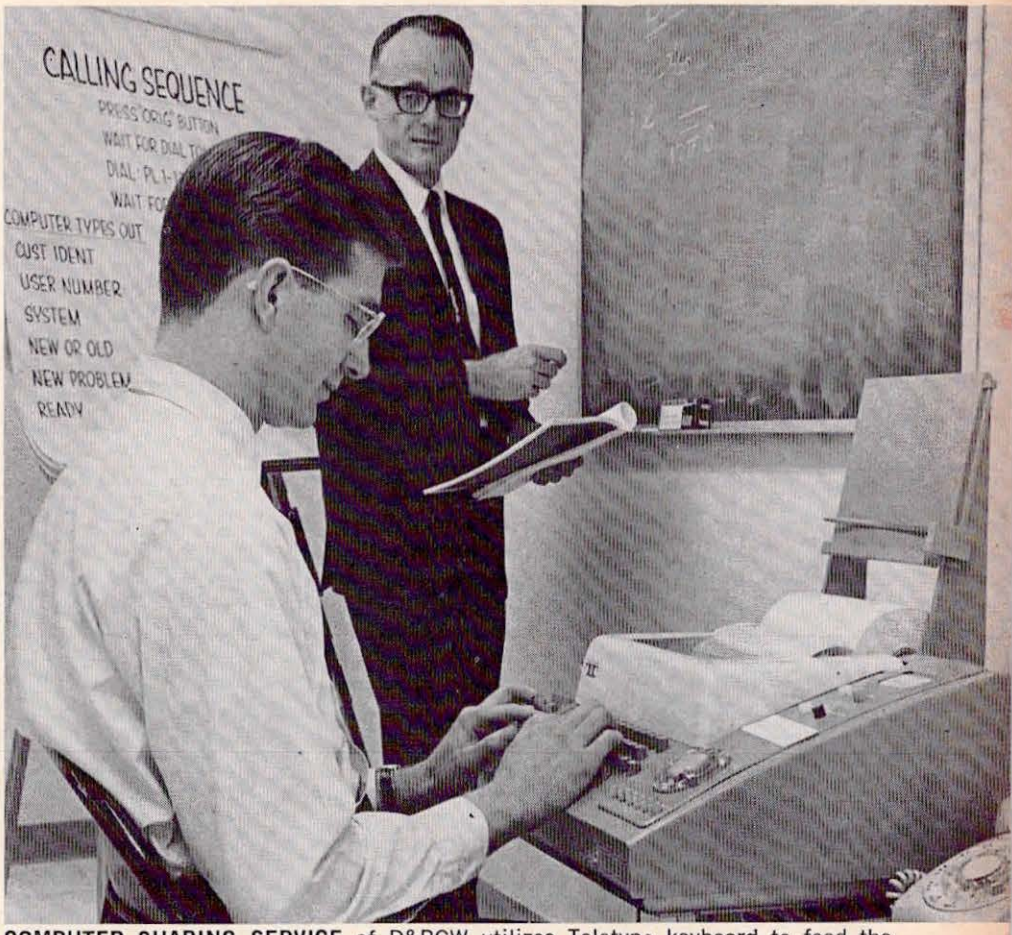
The new firm will offer computer time service to businessmen, researchers and educators through a 225 General Electric time-sharing computer system designed to serve many input stations at one time.

● **No programmers needed.** According to G. B. Aydelott, Rio Grande president, the main advantage of the new service is that customers can use the computer without extensive programming by trained personnel.

"The user can learn the programming elements of input called BASIC (Beginner's All-purpose Symbolic Instruction Code) in a few hours. He can then work out his own programs depending on what problems he wants solved, and the computer will guide him a step at a time, until he has the answers," Aydelott says.

It's a simple two-way operation: Local industrial and professional clients dial the computer from a terminal (a Teletype keyboard) and feed in information in normal conversational language. The computer responds with questions and answers in simple words and numbers.

● **Fast, fast, fast.** When the customer dials the computer's number, the computer is activated and answers with a confirmation tone. Responding to a short series of typed questions from the computer, the operator identifies himself, indicates the name of one of the available programming languages and gives the name of the program.



COMPUTER SHARING SERVICE of D&RGW utilizes Teletype keyboard to feed the computer information from customers who dial in with problems.

If the program is one that has been stored previously, the computer retrieves it. When ready to start work, the computer types "READY." The user either writes a new program or runs an existing one. The computer solves the problem and prints out the answer at the terminal—all in a few seconds.

"Since no extensive programming experience is necessary, the system can be operated on a trial-and-error basis. One can correct one's own mistakes and compute at one's own speed. When errors are made, the computer notifies the user and permits corrections. At no time is the user under pressure from others to complete processing by a certain time," Aydelott explains.

Operating at a space-age speed, the computer can handle input information and responses from many sources simultaneously, so fast that it seems "as though yours is the only program being serviced," Aydelott says. The service will be streamlined even more through the development of improved terminal equipment that will provide outputs such as curves, graphs and symbols.

Customers can use Teletype terminals connected to the system through TWX or Dataphone dial-up service. The Teletype equipment also may be connected to the computer by an ordinary telephone by means of an acoustical coupler or data transceiver. All messages are handled by common carrier facilities, telephone or Teletype.

● **More diversification coming.** Formerly, time-sharing computer service was available in Denver only through long-distance, high-cost transmission procedures. The new Rio Grande division joins two other long-held company interests, the Rio Grande Motor Way and the Rio Grande Land Co. as a step in a diversification program, with further moves to be announced later this year. President of the new firm is William J. Day, who will continue as the railroad's director of management information services. Although the railroad already has a floor-full of third-generation-computer, total-information equipment in its main offices, Aydelott says D&RGW will be one of the new services' "prime customers." ■

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Any wonder why we're called the rapid-transit pioneer?

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Alcoa Aluminum

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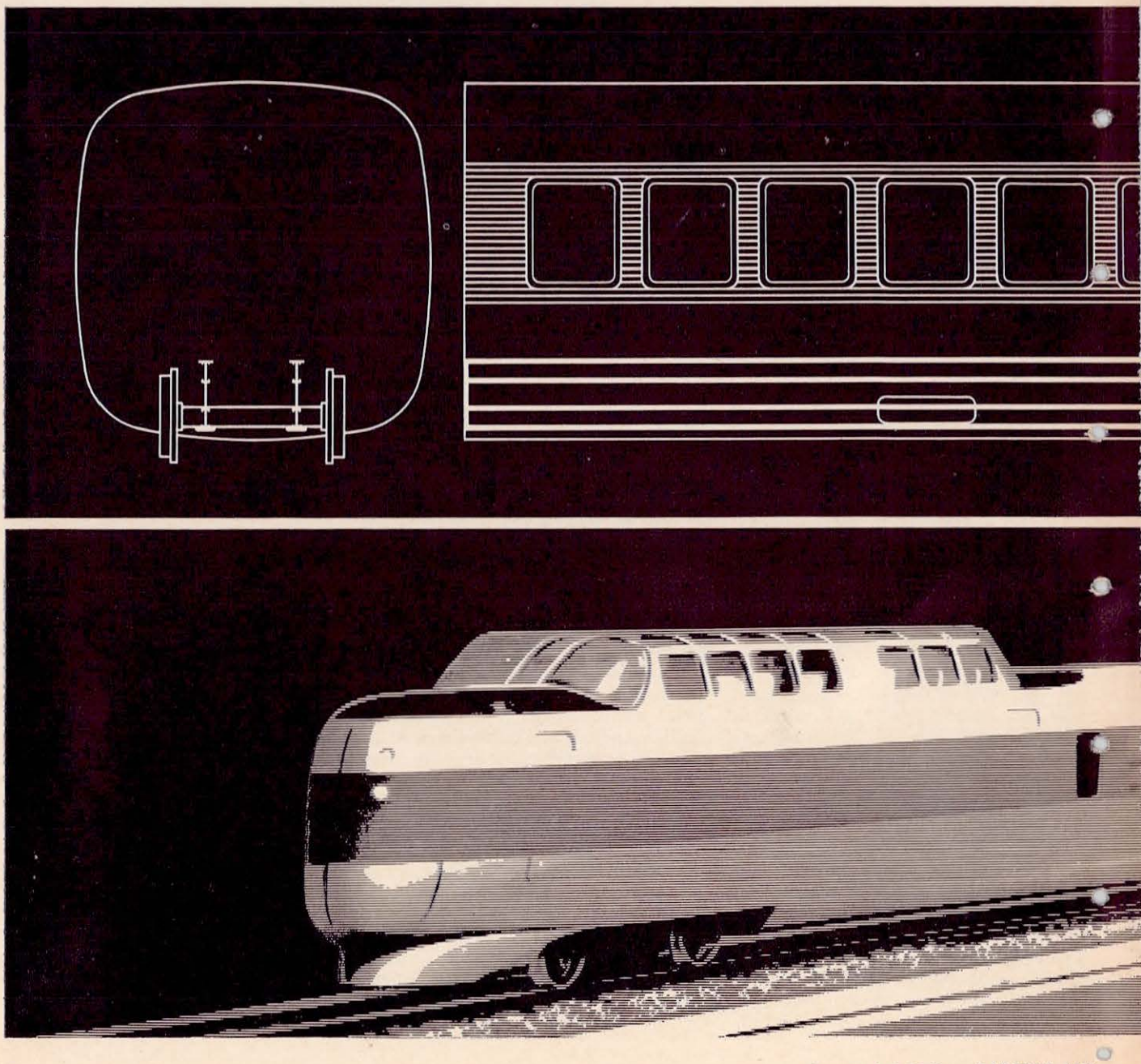

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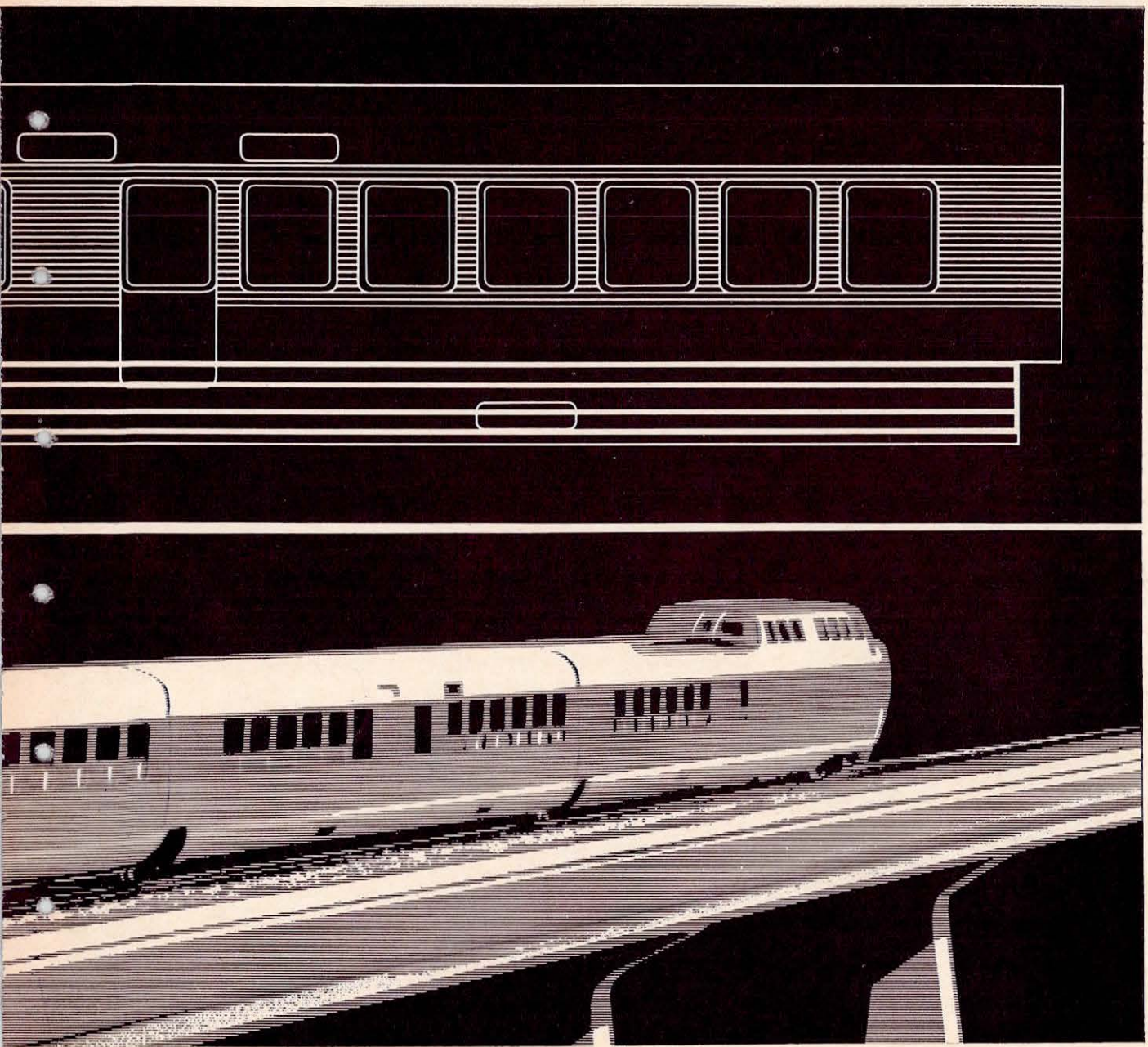


Circle 12 on reader service coupon

IMPORT-EXPORT TRADE planning gets the attention of Great Northern men at a top-level conference. Left to right, M. M. Scanlan, vice president-marketing; John L. Robson, vice president-operations; Hideo Takaoka, GN import-export agent in Japan; GN President John M. Budd; and Roy M. Inui, Seattle general manager of Transpacific Export Corp., GN's agent in Japan.

Northern Roads turn eyes to the Far East

Railroadmen see all the makings of a boom in the growing import-export traffic between the Orient and the West Coast.

NP's "TOKYO EXPRESS" speeds eastward through Montana on an experimental run. The TOFC/COFC train handled both import-export and domestic traffic.

Santa Fe is getting its 40-hour Chicago-West Coast TOFC/COFC train into service first, this month—but it's not the only road that's looking at the possibility of running trailer/container trains on passenger-train schedules.

Northern Pacific recently made an experimental test-run of a TOFC/COFC special on the schedule of the "North Coast Limited"—and 36½ hours after departure from Seattle, the "Tokyo Express" arrived in NP's Northtown Yard at Minneapolis, 1,875 miles distant.

Actually, the TOFC/COFC train did the "North Coast" one better. It departed Seattle 90 minutes after the passenger train and, with fewer stops en route, made the run to the Twin Cities with an arrival time close to two-and-a-half hours ahead of the streamliner.

• **The growing demand.** E. M. Stevenson, NP's vice president-traffic, and Masae Kitigawa, director of Far East sales in Tokyo, had this comment to make: "The growing demand by shippers for shorter transit time, particularly in import-export trade, along with an increasing volume of business from Far East ports, may soon generate enough traffic to justify inauguration of regular service on the fast time schedule achieved by the experimental train."

NP's test train made only one pick-up stop on its way east—at Pasco, Wash., to pick up loads from Portland and Yakima. At Minneapolis, the "Tokyo Express" consist went into interchange for delivery to Chicago. While the Seattle-Chicago time didn't match Santa Fe's Los Angeles-Chicago 40-hour schedule, it was respectably close. And NP people could point to the advantages of Seattle as a port of entry or departure for the Japan trade, as opposed to Los Angeles, from an ocean-time and perhaps a total elapsed-time standpoint.

Commodities hauled by NP's entry included electrical components and appliances, toys, sporting goods, plastic fruit and flowers, earthenware, Christmas decorations and kitchenware from Japan; and steel castings, paper products, fresh fruit and canned fruit from domestic shippers.

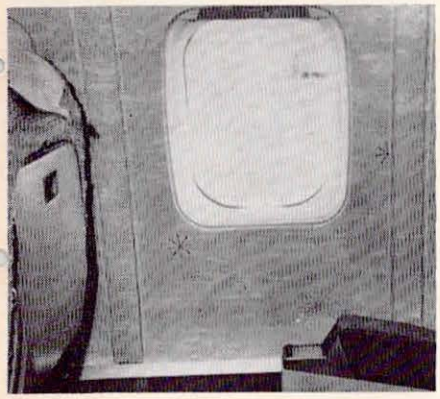
• **GN looks ahead.** Meantime, NP's neighbor in the North Coast market and, probably, its merger partner was looking to the future market role of the Twin Cities in the Japan trade picture.

Hideo Takaoka, Tokyo manager of Transpacific Export Corp. and Great Northern's export-import agent in Japan, noted that a 50% increase in U.S.-Japan trade is expected within the next decade, and that the Minneapolis-St. Paul complex will have an important role in this expansion.

Takaoka pointed out, for one thing, that Japan will be dependent upon the United States for more foodstuffs, as new industries in Japan expand into land now used for agriculture. For his part, GN President John M. Budd is on record as forecasting that "shipments through the Pacific Northwest will double in the next five years," and that the container revolution will really begin next October when trans-Pacific ship lines complete their conversion to container operation. The advantage, as pointed out by North Coast railroads: Traffic moving via the Northwest ports can move by ship and rail to the East Coast in 16 days, as opposed to the 24 days required by all-water movements through the Panama Canal.

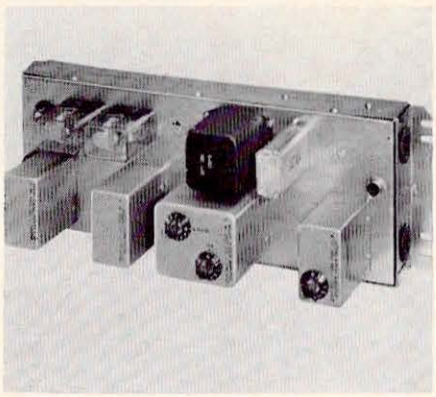
And as if to underscore the future importance of the Pacific trade to railroads, Union Pacific announced the appointment of a traffic consultant in Taiwan, as a follow-up to establishment of a traffic office in Tokyo. UP's new representative on the island will also handle other key points, including Hong Kong, Korea and The Philippines. ■

NEW **PRODUCTS** REPORT



Bonding Film (RA-1)

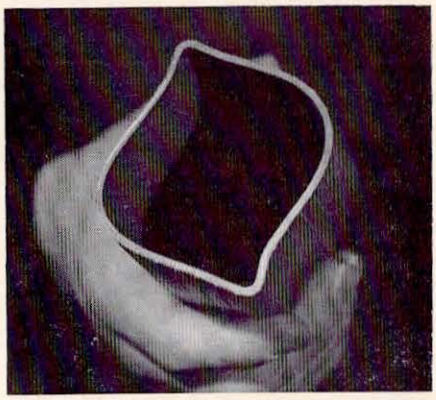
The GP Pre/Set Bonding Film Gripmount K-44 is a high-strength, pressure-sensitive bonding film for mounting decorative vinyl interior panels in cars and other vehicles. Light heat is used to install the panels. The water-white film is said to have good resistance to humidity and climatic changes. It is supplied in rolls, sheets, and diecuts to specified dimensions in gages of 0.005 and 0.009 in. *Girder Process Div., United Shoe Machinery Co.*



Dispatcher's Amplifier (RA-2)

An improved line of solid state dispatcher's amplifiers for shelf or relay rack mounting is now available. Units are composed of plug-in modules. Systems are available for operation on 117 volts AC, 60 Hz, 12, 24, or 48 volts DC. Amplifiers are available with fallback relay for operation on DC in the event of AC power failure.

Units are available for 2-wire or 4-wire operation. *R. W. Neill Co., division of Marquardt Industrial Products.*



All-Purpose Hose (RA-3)

Outer sleeve and inner tube of Poly-Spun hose are constructed of polymer Ozex, reinforced between outer and inner sleeves with a thin layer of spun polyes'er fabric. Outer cover is ribbed for greater abrasion resistance. The hose is said to be resistant to oils, solvents, chemicals, weathering and abrasion. It is available in 1½- 2½- and 3-in. diameters in lengths to 100 ft. Weight of 100 ft of 1½-in. hose is 24 lb. *Fabric Fire Hose Co.*

Brake Disc (RA-4)

Boron deoxidized copper approved for liquid-cooled, multiple-disc aircraft brakes can also be used in braking equipment for high-speed railroad and rapid-transit service. The brakes operate as much as 1,500 deg F cooler than conventional air-cooled brakes. The function of the copper plate, which is suitable for brazing at the high temperatures encountered, is to produce friction and conduct heat. *Anaconda American Brass Co.*

Marking System (RA-5)

Tuffak, a multi-component marking system for producing decals and other markings used on railroad cars and other vehicles includes a flexible acrylic film backed with a pressure-sensitive acrylic adhesive; a "lay flat" protective paper backing sheet; specially formulated compatible inks; a protec ive acrylic top coat; and a pressure-sensitive application tape. The film is supplied in opaque colors, in 50-yd rolls of 24-, 36-, and 48-in widths. *Rohm and Haas.*

Multiplex System (RA-6)

The MC-300 multiplex system meets CCITT frequency allocations, VF response and signaling requirements. Modular construction is used with glass epoxy 4W modem card and termination card. All modem cards are identical with no frequency determining elements. Voice frequency terminations include solid-state E & M leads, and all others are derived with applique overlay cards. Input power is 24 or 48 volts DC or 120 volts AC. *Motorola Communications & Electronics Inc.*

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PEOPLE IN THE NEWS

AMERICAN SHORT LINE RR ASSN.—Ray J. Janer appointed traffic manager, senior, Eastern Region, Washington, D.C. Mr. Janer formerly was general traffic manager, Penn-Dixie Cement Corp.

BURLINGTON.—Richard E. Bieber, industrial agent, Omaha, named assistant general manager-industrial development, Chicago. **O. J. Norman,** industrial agent, Industrial Development and Real Estate Department, appointed manager, industrial and agricultural development, Omaha, to succeed Mr. Bieber. Mr. Norman's successor is **Walter D. Farrell,** office manager, Industrial Development and Real Estate Department. **James Shepherd,** sales representative, Seattle, named sales manager, Toronto, Ont., effective Jan. 2, to succeed **Frank Wall,** retiring. **Thomas Walker,** chief clerk, Freight Department, Denver, named freight sales representative, St. Paul.

CHICAGO & NORTH WESTERN.—J. J. Sacheck appointed assistant to general superintendent Car Department, Chicago. **I. M. Kulbersh** named mechanical engineer-car, Chicago.

D. W. Schwarz appointed superintendent, Lake Shore division, Green Bay, Wis. **W. J. Lockwood** named trainmaster, Lake Shore division, Fond du Lac, Wis. **T. G Swartzlander** named assistant general manager-piggyback, Chicago. **J. R. Welker** appointed assistant superintendent car service-data reporting, Chicago.

H. O. Tell, operations liaison officer-labor and personnel, Chicago, promoted to assistant superintendent transportation there. Mr. Tell's successor is **E. L. De Vol,** trainmaster-traveling engineer, Nebraska division, Fremont, Neb. **F. Cockerham** succeeds Mr. De Vol. **C. L. Cook** named trainmaster, Galena division, Madison, Ill.

CHICAGO & WESTERN INDIANA.—T. R. O'Reel named assistant secretary and assistant treasurer, Chicago.

CHICAGO, WEST PULLMAN & SOUTHERN.—Michael C. Kirby appointed assistant to the superintendent.

FORT WORTH & DENVER.—J. M. Ellis appointed superintendent security—freight claim prevention, Fort Worth, Tex. Abolished position of chief special agent.

GREAT NORTHERN.—W. S. Byrne, superintendent, Mesabi division, Superior, Wis., transferred to the Spokane division, Spokane, to succeed **E. C. Coan,** who resigned Dec. 1. **M. M. Donahue,** assistant superintendent, Cascade division, Klamath Falls, Ore., succeeds Mr. Byrne, and in turn is succeeded by **V. W. Bice. L. E. Hill** named manager, industrial engineering, and **Jerry R. Luepke,** industrial engineer, both with headquarters at St. Paul. **David S. Nelson** named terminal manager, Spokane-Hillyard terminal.

JERSEY CENTRAL.—Joseph R. Walsh, general superintendent, appointed to the new position of general manager, Newark, N.J. **Clifford W. Buchman,** assistant superintendent transportation, promoted to superintendent of transportation, succeeding **Norton P. Willis,** retired.

N. W. James named director of public relations, Newark, N.J. (RA, Dec. 11, p. 52). Mr. James joined the road in 1941 and has been director of publicity since 1954. He is chairman of the recently-formed Railroad Community Service Committee of New Jersey.

KANSAS CITY SOUTHERN.—Ted H. Presby named general agent, Denver, to succeed **Harry L. Sullivan,** who retired Nov. 30 after more than 33 years' service.

Finis H. Walker, general agent, Oklahoma City, Okla., retired Dec. 31, after more than 31 years of service. With Mr. Walker's retirement, the Oklahoma City office was closed and the responsibility for accounts in that agency was transferred to **John C. Walker,** general agent, Tulsa, Okla.

LOUISVILLE & NASHVILLE.—Has established a management information services department at Louisville. **Samuel A. Alward,** director of data processing, named director of the new department.

MILWAUKEE.—Pierce W. Davis, industrial engineer, appointed western manager-real estate development, with headquarters at Seattle.

MISSOURI-KANSAS-TEXAS.—Paul W. Neidert, chief clerk-corporate accounting control, named auditor-disbursements, Denison, Tex., succeeding **W. E. Botschon,** who retired Nov. 1.

MISSOURI PACIFIC.—Denis I. Doyen, chief clerk, Export-Import Division, Freight Traffic Department, named assistant to freight traffic manager, St. Louis.

NATIONAL RAILROAD ADJUSTMENT BOARD.—Harold W. Burtness, carrier member, retired Nov. 30 after more than 53 years of service in the railroad industry. He was formerly president, **Chicago Great Western.**

NEW YORK CENTRAL.—James M. Loconto appointed director of passenger service. He will be responsible for the new passenger services for New York State inaugurated on Dec. 3 (RA, Nov. 27, p. 82). Mr. Loconto, who has been director of suburban service since Sept. 1964, will continue to be responsible for suburban and commuter services in the New York metropolitan area.

L. Thomas Houser, corporate attorney, New York, named assistant general counsel, law department. **Frederick W. Rovet,** real estate attorney, appointed assistant general counsel.

NORFOLK & WESTERN.—George M. Irvin, passenger sales manager, St. Louis, Mo., appointed sales manager there. **Lyle F. MacMillan,** manager piggyback, Cleveland, promoted to district sales manager, Muncie, Ind. **Briggs Thornton,** assistant manager piggyback, Roanoke, appointed to the new position of district sales manager-TOFC, Atlanta. **R. T. Bevans** appointed to the new position of assistant traffic manager—TOFC sales, Roanoke. **William L. Eubank, Jr.,** promoted to sales representative, Buffalo, N.Y.

W. B. Van Lear, assistant manager signals and communications, promoted to manager signals and communications, Roanoke, succeeding the late **J. G. Karlet. N. S. Lewis,** regional engineer signals and communications, Atlantic and Pocahontas regions, named engineer signals and communications, Roanoke. **J. V. Henretta,** assistant regional engineer signals and communications, Atlantic and Pocahontas regions, named regional engineer signals and communications, succeeding Mr. Lewis, **C. J. Talley,** assistant engineer signals and communications, Roanoke, named assistant to manager signals and communications, a new position. **A. Gear, Jr.,** assistant supervisor signals and communications, Portsmouth, Ohio, named assistant engineer signals and communications, Roanoke, succeeding Mr. Talley.

William I. King, engineer-construction, Portsmouth, Ohio, retired Dec. 1, after 43 years with the N&W. **A. H. Steele, Jr.,** assistant division engineer, Bluefield, W. Va., transferred to Portsmouth, **J. N. Carter,** supervisor bridges and buildings, Norfolk, succeeds Mr. Steel at Bluefield. **A. C. Walker, Jr.,** assistant supervisor bridges and buildings, promoted to supervisor bridges and buildings, Crewe, Va. **R. T. Goode,** carpenter foreman, Norfolk terminal, named terminal supervisor bridges and buildings, Norfolk.

The Toledo, Ohio, terminal of the N&W has been placed under supervision of the Pittsburgh division. **C. W. Lewey,** superintendent, Pittsburgh division, Brewster, Ohio, has assumed responsibility for Toledo terminal operations. **K. F. Brabender,** superintendent, Toledo terminal, transferred to the new position of supervisor, car floating operations, Detroit, Mich. **Paul E. Stitt,** assistant superintendent, Chicago terminal, named assistant superintendent, Toledo. **Bill Bridger,** Scioto division road foreman of engines, replaces Mr. Stitt at Chicago terminal.

Roger J. Crosby
NP

John O. Davies
NP

C. W. Thompson
NP

C. R. Binger
NP

William J. Hedley, assistant vice president, St. Louis, retired recently after more than 42 years of railroad service.

NORTHERN PACIFIC.—Earl F. Requa, vice president and general counsel, St. Paul, Minn., appointed senior vice president there. **Frank S. Farrell,** general solicitor, succeeds Mr. Requa. **F. Lynn Steinbright,** vice president—operations, St. Paul, named vice president, executive department, Seattle, Wash. **Norman M. Lorentzsen,** general manager—lines west, Seattle, succeeds Mr. Steinbright at St. Paul. **Roger J. Crosby,** assistant western counsel, Seattle, promoted to western counsel there, succeeding **Dean H. Eastman,** vice president and western counsel, who retired Dec. 31. **John O. Davies,** general superintendent of transportation, St. Paul, succeeds Mr. Lorentzsen at Seattle. **Charles W. Thompson,** assistant to general manager—lines east, succeeds Mr. Davies.

C. R. Binger, appointed vice president—resources and development, effective Jan. 1. Mr. Binger formerly was general manufacturing manager, Insulite division, Boise Cascade, International Falls, Minn.

O. W. Cobb, assistant general freight traffic manager—rates and divisions, St. Paul, named to the newly created position of general freight traffic manager—rates. **J. R. Farnen,** assistant general freight agent—rates, St. Paul, named general freight agent—rates and divisions there. **R. B. Formico,** assistant general freight agent, rate department, St. Paul, named general freight agent—rates. **F. M. Bollinger,** assistant general freight agent—rates and divisions, promoted to general freight agent—rates and divisions. **LeRoi C. Anderson,** assistant to the general freight traffic manager—rates and divisions, named assistant general freight agent—rates. **John Wasiluk,** chief clerk to the assistant general freight agent—rates and divisions, appointed assistant to the general freight agent—rates and divisions.

W. D. Schoettler, general tax agent, appointed assistant director of property taxes, Seattle, to succeed **C. E. Gallagher,** retired.

PENNSYLVANIA.—William G. Hill, supervisor of stations, Allegheny Division, Altoona, Pa., transferred to the Harrisburg division, succeeding **Luther N. Hoover.** Mr. Hoover named supervisor of stations, Pittsburgh division at Pittsburgh, succeeding **R. N. Long,** retired after 40 years with the PRR. **William J. Noone,** agent, Harrisburg, succeeds Mr. Hill at Altoona.

Clyde Nichols, real estate agent, New York, appointed manager real estate there. **Donald R. Leitsch,** supervisor, real estate, Pittsburgh, appointed real estate agent, Northern Division, Buffalo, succeeding **John J. Sweeney,** named manager, real estate, Chicago.

PULLMAN COMPANY.—D. Henry, general storekeeper, Chicago, retired Dec. 1, after 47 years of service. **H. G. Johnson** appointed manager of material.

RAILWAY SYSTEMS & MANAGEMENT ASSN.—Grant C. Vietsch, executive director, elected president.

REA EXPRESS.—Joseph T. Kane, manager of editorial services, promoted to assistant director, public relations and advertising division, New York.

ROCK ISLAND.—J. Ted Wells appointed manager-grain marketing, Kansas City. He was formerly transportation commissioner, **Kansas City, Mo., Board of Trade.**

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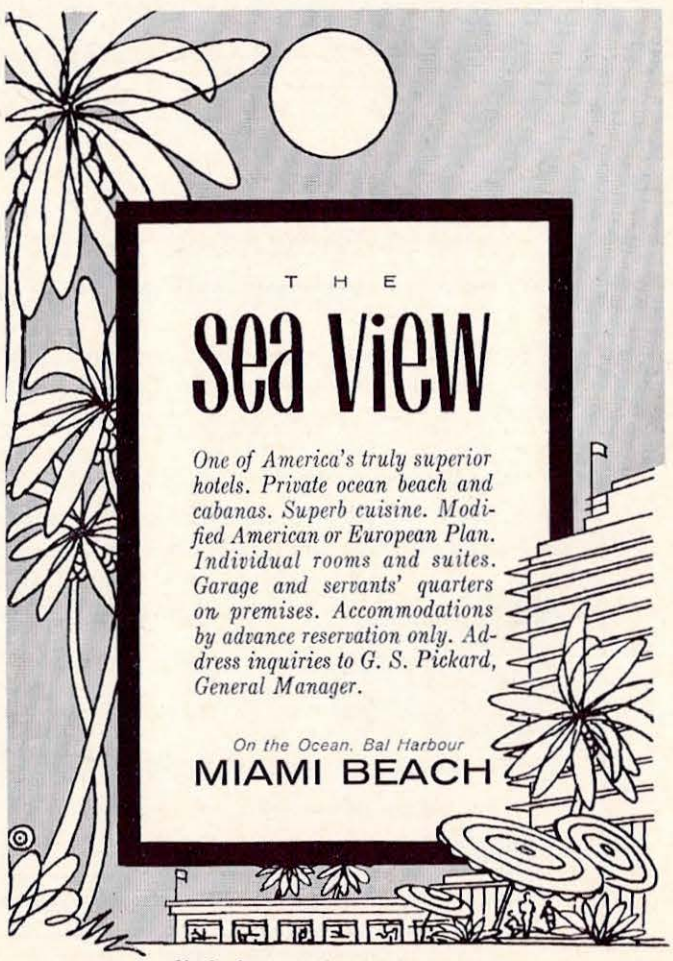
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Robert J. Ely
Abex

Charles E. Godfrey
Abex

Albert L. Cook
Huck

E. C. Rathmann
Magnus Metal

SUPPLY TRADE

Robert J. Ely has been appointed assistant to the vice president—engineering, Abex Corp., Mahwah, N.J. Mr. Ely had been serving as manager, contract research and development, Mahwah research laboratory.

Charles E. Godfrey, sales representative, Chicago district, has been appointed sales manager, Denver district, replacing **Robert N. Post,** transferred to Mahwah as manager of trackwork products.

Albert L. Cook has been appointed vice president—marketing, **Huck Manufacturing Co.,** Detroit, Mich. Mr. Cook was formerly general sales manager.

Edward C. Rathmann, eastern sales manager, **Magnus Metal Corp.,** has been appointed general sales manager, New York. **J. J. Hickey** continues as vice president and regional sales manager, Chicago.

Ted W. Harbs has joined the railroad sales staff, **New Departure—Hyatt Bearings Division, General Motors Corp.,** Oak Brook, Ill. Mr. Harbs was formerly associated with Transco Incorporated.

Jack R. Long has been named manager, locomotive and transit sales, **Rockwell Manufacturing Co., LFM-Atchison Division.**

Ellis E. Walker, Jr., has been appointed railroad sales engineer, Commercial Electronics Division, **Sylvania Electric Products,** New York. He joined Sylvania in 1963 after service with the **Boston & Maine.**

TRANSIT

James H. Graebner, supervisor, Mass Transit Market Research, WABCO Mass Transit Center, has joined **W. C. Gilman & Co., Inc.,** Cleveland, as a consultant in the fields of transit planning, operations, and management.

MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended Dec. 23 totaled 501,177 cars, the Association of American Railroads has announced. This was a decrease of 31,159 cars, or 5.9%, compared with the previous week; a decrease of 22,046 cars, or 4.2%, compared with the corresponding week last year; and an increase of 35,627 cars, or 7.7%, compared with the equivalent 1965 week. Ton-miles generated by carloadings in the week ended Dec. 23 are estimated at 13.1 billion, an increase of 0.1% above the corresponding week of 1966, and 10.8% above the 1965 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Dec. 23

District	1967	1966	1965
Eastern, including Allegheny and Pocahontas	200,445	207,030	180,949
Southern	108,431	114,067	99,036
Total Eastern and Southern Districts	308,876	321,097	279,985
Northwestern	59,250	60,873	54,548
Central Western	97,150	105,692	97,579
Southwestern	35,901	35,561	33,438
Total Western Districts	192,301	202,126	185,565
Total All Roads	501,177	523,223	465,550
Commodities:			
Grain and Grain Products	44,934	50,666	46,332
Livestock	1,286	1,482	1,550
Coal	100,798	114,425	95,293
Coke	7,854	7,691	6,843
Forest Products	35,366	37,702	35,923
Ore	18,357	19,432	13,216
Merchandise l.c.l.	3,973	5,675	6,577
Miscellaneous	288,609	286,150	259,816
Dec. 23	501,177	523,223	465,550
Dec. 16	532,336	550,533	547,785
Dec. 9	553,382	562,669	574,141
Dec. 2	554,921	572,189	576,261
Nov. 25	490,462	524,057	515,050
Cumulative total, 51 weeks	27,653,137	29,207,471	28,789,193
Estimated revenue ton-miles (billions) 51 weeks	710.0	728.0	686.1

PIGGYBACK CARLOADINGS—U.S. piggyback loadings for the week ended Dec. 23 totaled 23,245 cars, carrying 38,317 trailers, compared with 20,562 cars carrying 33,247 trailers in the corresponding 1966 week. Loadings for 1967 up to Dec. 23 totaled 1,189,133 cars carrying 1,953,971 trailers, compared with 1,145,785 cars carrying 1,885,137 trailers in the corresponding period of 1966.

IN CANADA—Carloadings for the seven-day period ended Dec. 7, 1967, totaled 71,817 cars, compared with 100,283 for the previous nine-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Dec. 7, 1967	71,817	25,252
Dec. 7, 1966	73,841	25,446
Cumulative Totals		
Dec. 7, 1967	3,581,268	1,160,663
Dec. 7, 1966	3,804,480	1,176,194

FREIGHT TRAIN CARS

► *Katy.*—Ordered 500 50-ft and 100 40-ft box cars from ACF and 300 100-ton open-top hopper cars from Greenville.

PASSENGER TRAIN CARS

► *Chicago Transit Authority.*—The City of Chicago awarded a contract to Budd for 150 new, air-conditioned rapid transit cars at a total cost of $18,750,000. Cars will be equipped with stainless steel bodies, cam-type power control and, possibly, fiber glass front end units. Deliveries are to begin in August.

► *Massachusetts Bay Transportation Authority.*—Ordered 76 transit cars from Pullman-Standard, at a cost of $13,040,212. The 26 two-car units and 24 single-car units will have aluminum bodies, be 70 ft in length, and be capable of speeds up to 70 mph. They will be air-conditioned, and carry a maximum of 239 passengers each. To be installed are laminated safety glass windows, fiber glass insulation, sound-deadening coatings, upholstered and padded seats, and a radio and public address system. The cars are to be ready for service when the South Shore line is completed, in mid-1969.

CAPITAL EXPENDITURES

► *Great Northern.*—Capital spending for 1968 will total $39.4 million, including $26.3 million for purchase of 24 new diesel-electric units and 815 freight cars. In addition, 225 freight cars will go through a rebuilding program at St. Cloud, Minn., company shops. Present plans call for acquisition of 18 road freight (3,600 and 3,300 horsepower) locomotives and six switching units. In the freight-car program are 200 100-ton hopper cars; 200 70-ton solid-bottom gondolas; 150 bulkhead flat cars; 100 100-ton wood chip cars; 150 box cars for lumber service; and 15 70-ton flat cars. Also scheduled is acquisition of 10 cabooses.

► *Reading.*—Plans 1968 expenditures totaling at least $10 million. An estimated $6 million will go for freight cars; $1 million for completion of track and clearance improvement program on major routes; $1 million for completion of a new wheel shop at Reading, Pa.; $1.5 million for construction of a new engine house and car shop at Port Richmond Yard; $500,000 for other yard work.

ORDERS AND DELIVERIES

► *Orders rise.*—Orders were placed in November for 6,221 new freight cars, compared with 2,398 in October and 6,209 in November 1966. Orders for new cars in last year's first 11 months totaled 45,949, compared with 91,413 in the corresponding period of 1966. Orders for rebuilt cars totaled 2,291 in November, compared with 407 in October and 5 in November 1966. Orders for rebuilt cars in last year's first 11 months totaled 15,719, compared with 11,616 in the 1966 period. Deliveries of new cars in November totaled 5,122, compared with 6,039 in October and 7,368 in November 1966. Deliveries during the first 11 months of last year totaled 77,612 new cars, compared with 81,860 in the corresponding 1966 period. Backlog of new cars on order and undelivered on Dec. 1 was 21,828 compared with 21,082 on Nov. 1 and 56,395 on Dec. 1, 1966. Backlog of cars ordered for rebuilding totaled 9,802 on Dec. 1, compared with 9,039 on Nov. 1 and 9,355 on Dec. 1, 1966.

YOU OUGHT TO KNOW

ATSF will build pipeline: Santa Fe has announced plans for a $2-million pipeline between Amarillo, Tex., and Clovis, N.M. Scheduled for completion July 1, the pipeline will be built and managed as a common carrier by an ATSF subsidiary, Santa Fe Pipeline Company. The line mainly will carry jet fuel from Amarillo to Cannon Air Force Base near Clovis.

Move the mail by transit? Officials of the Cleveland Transit System are studying the possibility of using the coming CTS airport extension to haul mail for the U.S. Post Office Department. The Post Office in London has an underground railway of its own, and in New York, some interest has been shown in using existing subways for the same purpose.

ACF's 50,000th hitch: ACF has installed its 50,000th trailer hitch on a piggyback flat car. The car and hitch were manufactured at ACF's St. Louis plant for Trailer Train.

Transport research: The Department of Transportation awarded a $200,000 contract to the Transportation Center at Northwestern University, for research connected with the Northeast Corridor. A network simulation model will be built.

NP diversifying: Northern Pacific is moving into an area it knows well—the lumber business—in its continuing diversification program. NP President Louis W. Menk says agreement has been reached for purchase by the railroad of 93.6% of the common stock of Plum Creek Lumber Co., and 50% of the stock of Plum Creek's timber supplier, Royal Logging Co. Cost of the acquisitions will be more than $6 million. NP is now building a $1-million chip mill in Washington state, and Menk called the further diversification move "part of a program to more fully integrate NP's forest-products program."

No more "Fore!" Golfers who like the fairways and greens of the Mohawk Country Club near Chicago may have only a year or so to enjoy them. Then, they're going to become part of a new industrial district. The Milwaukee Road has owned the property since 1960—and it may rather soon become factory or warehouse sites. Meantime, the railroad and the Clearing Industrial District are developing adjacent acreage as a new industrial district. First development will come on 87 acres owned by the railroad and 157 acres belonging to the industrial district.

Fruehauf to acquire PACECO: An agreement by the Fruehauf Corp. to acquire PACECO, Inc. of Alameda, Calif. (formerly the Pacific Coast Engineering Co.) has been announced by William E. Grace, president of Fruehauf. Grace said Fruehauf will issue approximately 336,000 of its common stock for all the assets and liabilities of PACECO. He described the Alameda company as "the world leader in the design and construction of container, trailer and bulk commodity handling systems." PACECO's 1968 sales are estimated to be in the $25-$30 million range.

New car wheel plant: Abex Corp. has announced plans for a new railroad car wheel manufacturing plant in Bridgeton, Mo. The cost is estimated at $6 million. When in full production, the plant will turn out 110,000 wheels a year. The 100,000-square-foot plant is expected to open in May 1969 and reach full production in 1970.

Slaves up north: Canadian Pacific has been experimenting with mid-train slave locomotive units, coupling them to Robot 1—a car carrying the radio receiving and transmitting equipment through which remote control is maintained from the lead locomotive. Initial experiments in Quebec and Ontario freight service are to be followed by tests on the mountain grades between Calgary, Alta., and Revelstoke, B.C. CP uses Locotrol equipment, built by Radiation, Inc., for its slave operation.

Truck tonnage: Intercity truck tonnage in the week ended Dec. 16 was 3.2% below that of the previous week, and 0.9% below the volume in the corresponding week of 1966, according to American Trucking Associations.

Current statistics

Net Income	
9 mos., 1967	$342,200,000
9 mos., 1966	659,900,000
Carloadings, revenue freight	
51 wks., 1967	27,653,137
51 wks., 1966	29,207,471
New freight cars on order	
Dec. 1, 1967	21,828
Dec. 1, 1966	56,395
New freight cars delivered	
11 mos., 1967	77,612
11 mos., 1966	81,860
Serviceable cars	
Dec. 1, 1967	1,414,632
Dec. 1, 1966	1,420,553

RAILWAY BOOKSHELF

"The whole countryside looks toward their tracks, many substantial towns have grown up around their depots, and in some areas life itself seems to revolve around their schedules." A book about railroading in this country 80 years ago? No—part of a description of the railways in India in the December-January issue of "Venture" (Cowles Publications, New York), a magazine sub-titled "The Traveler's World." Not much technical detail here, but useful for anyone interested in doing business with Indian Railways—or in Indian life in general.

•

Handy for anyone with railway business overseas is the "Railway Directory and Yearbook," (1967-78 ed., Tothill Press, Ltd., London, England, 820 pp.). The book gives a few quick facts and figures on systems around the world, addresses of railway headquarters, and lists of top officials.

•

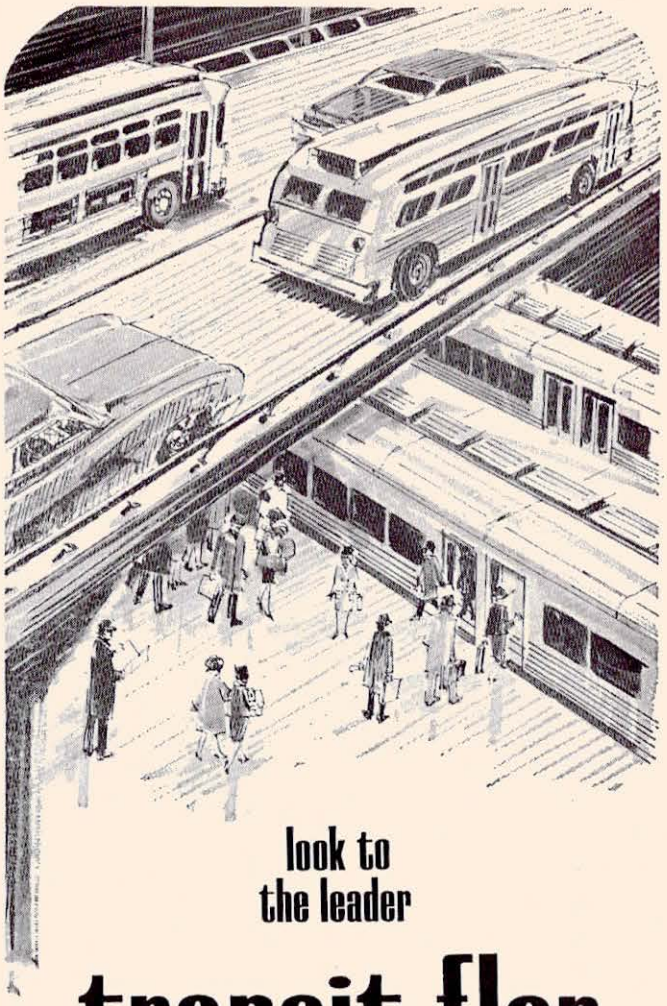
Computers are doing a lot more in transportation than just billing and accounting—and a good review of these applications, and some coming ones, too—will be found in "The Computer in Transportation and Physical Distribution" (Proceedings of the Fourth National Conference held last May by the Ohio Chapter of the Transportation Research Forum, Cleveland Ohio, 196 pp.). A good example is the report on network simulation citing experience on the Frisco.

•

Anyone concerned with urban design, or with its implications for urban transport, will want to read "The New City: Architecture and Urban Renewal." The book is a recapitulation of the exhibit in print and pictures held last year at the Museum of Modern Art (the publisher), New York. Not all of it is blue-sky: "Planning for the City of New York is a humbling pursuit," observes one of the contributors, Sidney J. Frigand, then deputy executive director of the New York City Planning Commission, and now with the Metropolitan Commuter Transportation Authority. The first master plan for the city goes back to 1625, he recalls. "By the following year, the plan was abandoned. From that point on, planning has been sitting in the back seat, while the city careened into its future."

•

The Cushioned Car Collection is a reference manual published by FreightMaster listing all cars equipped with their end-of-car hydraulic cushioning devices. Cars are indexed by number and type for nearly 30 railroads. Also in the manual is a comprehensive listing of railroad traffic representatives, with addresses and telephone numbers. Inquiries for the manual should be directed to Paul Howard, sales manager, FreightMaster Division of Halliburton Services, P.O. Box 2325, Ft. Worth, Texas 76101.



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LETTERS FROM READERS

Diversification: A Question

Washington, D. C.

To the Editor:

I enjoyed your editorial on the Common Ownership issue in the November 6 issue, p. 52. You make a valid point. The question that bothers me and which I've tried on railroad friends from time to time without a satisfactory answer is this: The most economical use of transportation resources may be to gather in the grain to a river port by rail, dump it in barges and send it to the sea-coast by water. If a railroad, for example the Illinois Central, owned a barge line would it substitute barge service for rail service where barge would be preferable, or not? If not, why would it want to own a barge line except for anti-social reasons? This seems to me to be an important economic aspect of the matter which seldom gets attention.

John A. Creedy
President
Common Carrier Conference
of Domestic Water Carriers

Livestock freight

Oakfield, N. Y.

To the Editor:

I am a cattle farmer and have shipped cattle from Kansas City to Oakfield by rail in carload lots. However, the trucks have taken over most of the live cattle business even on the long haul, for they give direct delivery to the farmer in his barnyard or feedlot. For the long distance, cattle are treated better by rail and it costs less, but it is inconvenient to back a truck up to a cattle car and there is always the risk of injury and added labor costs. If the rails would put two 40-foot containers on an 89-foot car that could be transferred to a truck for direct delivery they could recapture the livestock freight. My question is: Do the railroads want to let the livestock freight go down the drain—like the passengers and the first class mail?

Guy Kent Simons

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VIEWPOINT

Transit: Neither boom nor bust

Not long ago, suppliers to the mass transit industry were riding a great crest of hope and optimism. There was a lot of talk about a $10-billion transit market in the making—and companies that wanted a piece of the action got busy.

They put design teams to work on everything from new crossties to broad-ranging systems approaches; they mounted campaigns to drum up public support for the whole concept of mass transport and (hopefully) to hasten the day when it would become a reality; lacking an effective, organized lobby in Washington they nonetheless set out to try to persuade Congress and others influential on the federal scene that total reliance on asphalt and concrete was the road to chaos. And they did a pretty good job in all of these areas.

Half-way to success . . .

The suppliers played an important role, through relentless information campaigns that plugged an idea rather than any particular product, in changing the thinking in many cities—cities that had been so blinded by the glitter of 90-10 federal money that they had thought heretofore only in terms of concrete solutions. The ad hoc lobby in Washington and in state capitals—and we use the term "lobby" in its constructive, informational sense—helped to pass two federal mass transit laws and to get state legislatures to thinking about what they could contribute at their own level.

So the suppliers invested their time and money in a market that was more hoped-for than real. They were (they claimed) looking to the long term. Today's investment would pay off handsomely tomorrow.

The question is: When does tomorrow come? Some suppliers apparently think it is already here, and increasingly the question is heard: "What ever happened to that $10 billion market?"

The transit orders simply haven't been coming in at the expected rate. This—coupled with the temporarily depressed state of the line-haul railway market which so many transit suppliers depend on for their bread and butter—has led to a perceptible loss of enthusiasm for further costly promotion of the transit market. With the job only half-done, some suppliers are quietly backing off and taking that old wait-and-see attitude.

Is the transit market really that poor? A careful reading of this issue of Railway Age, containing our annual transit outlook, suggests that it isn't.

Car orders are a pretty good barometer of the way the market is trending. Consider, as a starter, the table on page 17. It shows, to no one's surprise, that 1967 was not exactly a banner year. Orders for new transit and commuter cars dipped to 320—about half of the 1966 figure.

Then look at '68 prospects. There are firm orders or commitments for around 1,100 new cars. The outlook through 1970 is for an additional 4,000.

Not, we'd say, an entirely bleak picture.

Population explosion watchers (if they happen also to be in the mass-transport business) will find further reason for comfort in the Urban Land Institute's recently published study, "Dimensions of Metropolitanism." Author Jerome P. Pickard predicts that the three biggest urban regions of the United States—which he identifies as the Metropolitan Belt, the California Region, and the Florida Peninsula—will increase their total population from 82.2 million to 131.2 million in 1980 and 187.3 million in the year 2000.

How are these people going to get from here to there? By what is euphemistically called a freeway—or by mass transit?

. . . is no time to let up

There's no getting around the fact that, right now, things are not moving ahead as swiftly as they could be in such cities as Washington, Atlanta and Los Angeles, to name just three. Washington is ready to dig—but first must dig up the money. In Atlanta the whole question of rail rapid transit has been thrown into doubt by the feud now raging between the entrenched bus transit people and the new rapid transit authority. In Los Angeles the highway lobby continues to work most effectively.

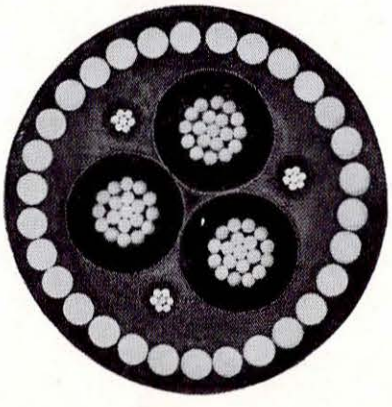
Isn't this all the more reason to press the fight harder, rather than to let up and wait-and-see?

Those who wait too long run the risk of seeing the highway men gain back the ground they have so reluctantly conceded.

on guard

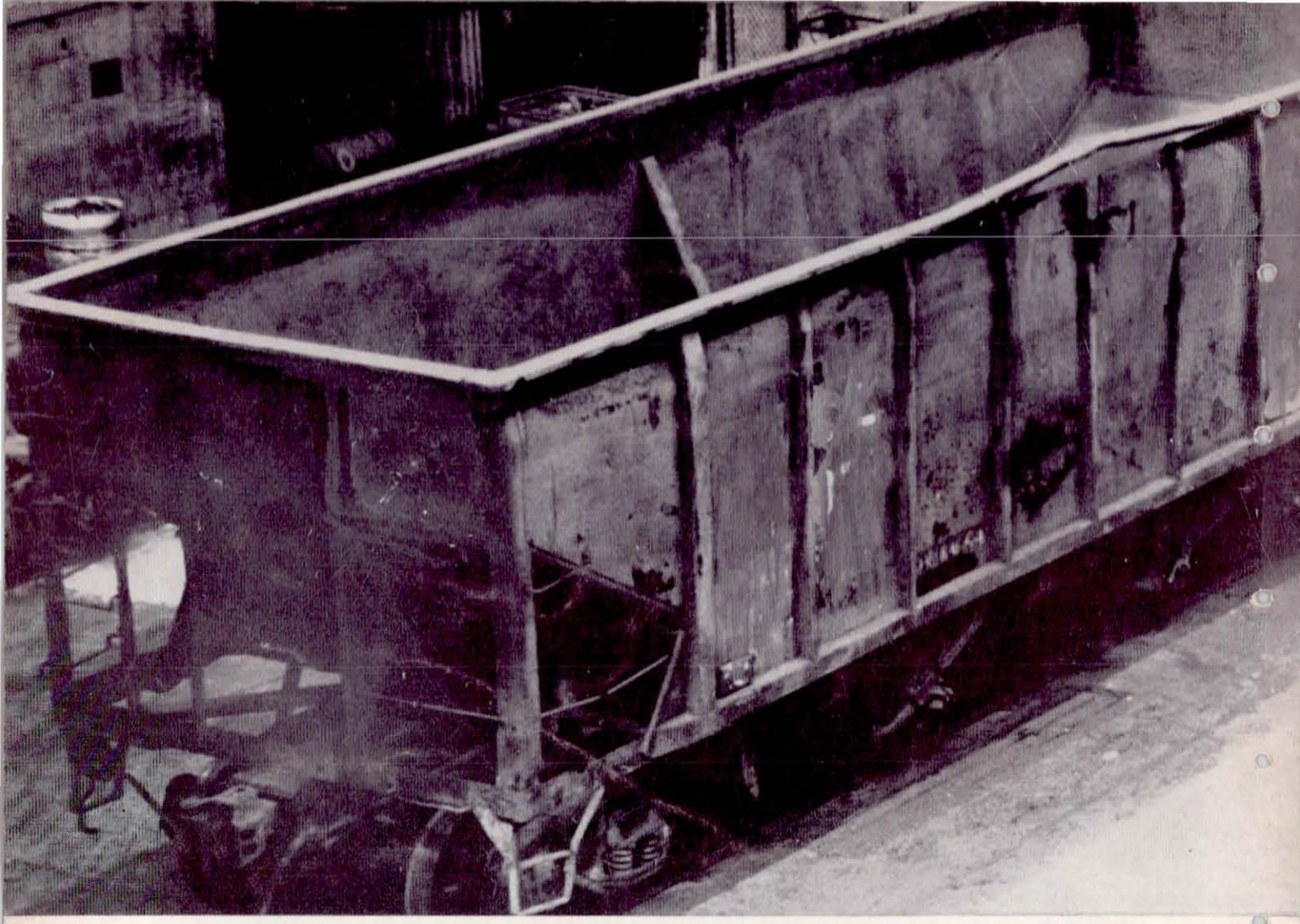
This is a nest of grouse eggs. A nest is a fragile concatenation of twigs, built by a delicate creature with no hands, but it is built to do a job, and it does that job to perfection. Within one classic circle, a nest is a home, a bed, and a protective shelter.

Below is a "plan" of a Kerite cable. Cables may look alike in cross-section, but a Kerite cable is as different from other cables as a nest is from random twigs. Kerite is built to do its job to perfection. Only the right combination of proved materials, engineering, experience, and technique makes it possible. The Kerite Company, 30 Church Street, New York, N. Y. 10007.



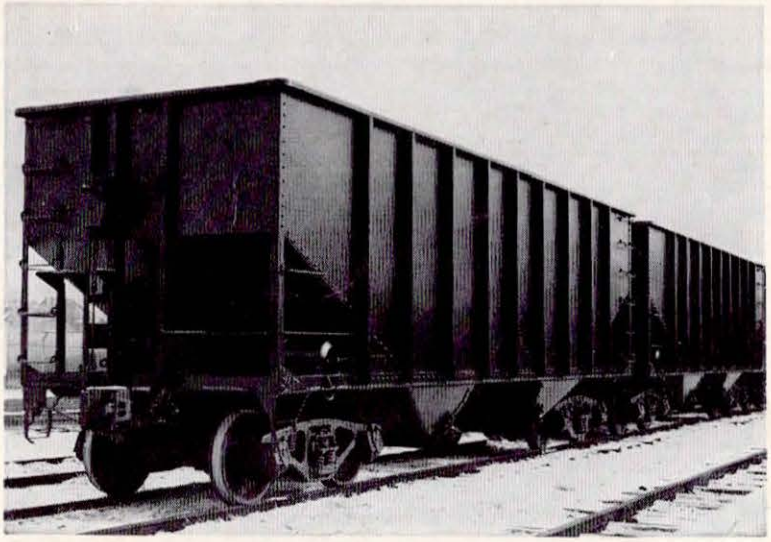
Kerite

the cable that lasts... and lasts... and lasts...



Hobbly-Hopper

This hopper has seen better days. Her sides are sagging in spots. Her bones are bent. She has a disease of the skin called rust. She's just too old and tired for the track anymore. But in Berwick's shop, they'll strip her down to the center-sill. Machine her axles. Shape her new sides and firm her ends. They'll dress her up in a suit of shiny black and send her out ready for action. It takes cutters with an eye, welders with a heart to prepare her for the thunderous applause she'll receive under the coal chute. You'll find them at Berwick. We've put hundreds of hobblers just like her back on the circuit and more are on the way.



Hoppity-Hopper

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